FREIGHT TRAFFIC ISSUE: HOW TMs VIEW RATE INCREASE p. 36

FEBRUARY 27, 1967

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RAILWAY AGE

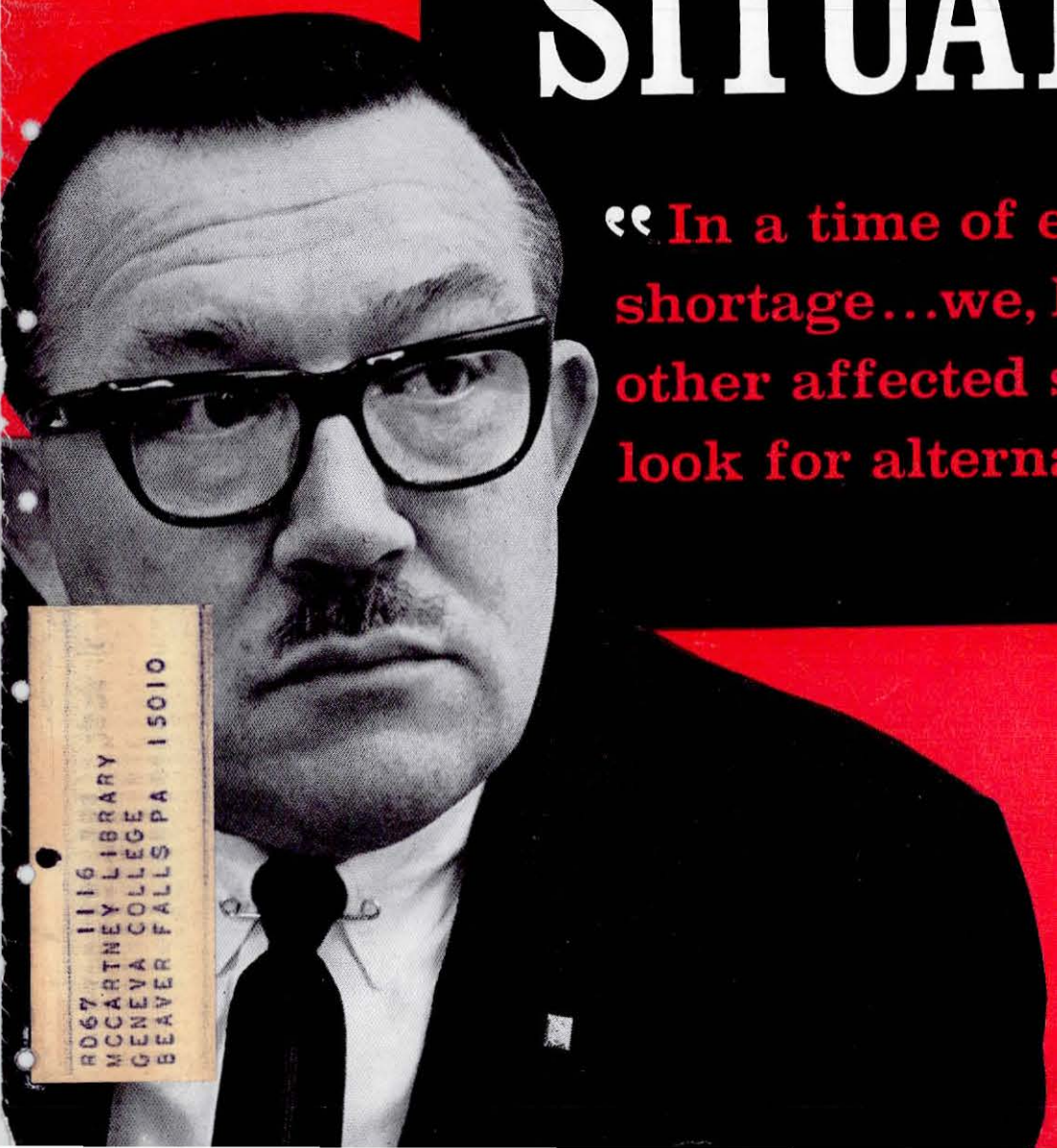
THE TRANSPORTATION WEEKLY

ALLIED MILLS' A. E. LEITHERER ANALYZES THE

CAR SUPPLY SITUATION

p.29

"In a time of equipment shortage...we, like every other affected shipper, will look for alternatives"



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Collins' new basic microwave design

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A new independent subsystem design is introduced in Collins' MW-109E (i-f heterodyne) and MW-108D (remodulating) series of microwave systems.

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For additional information on Collins' new subsystem design, call or write Microwave Marketing, Collins Radio Company, Dallas, Texas. Phone (214) AD 5-9511.

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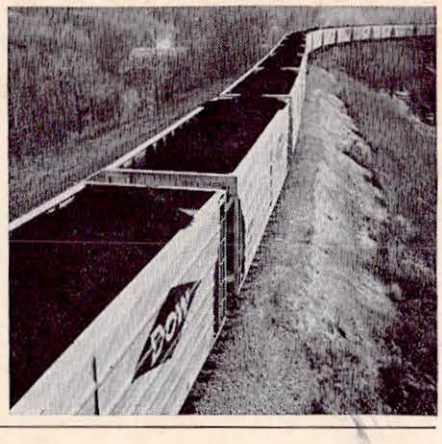

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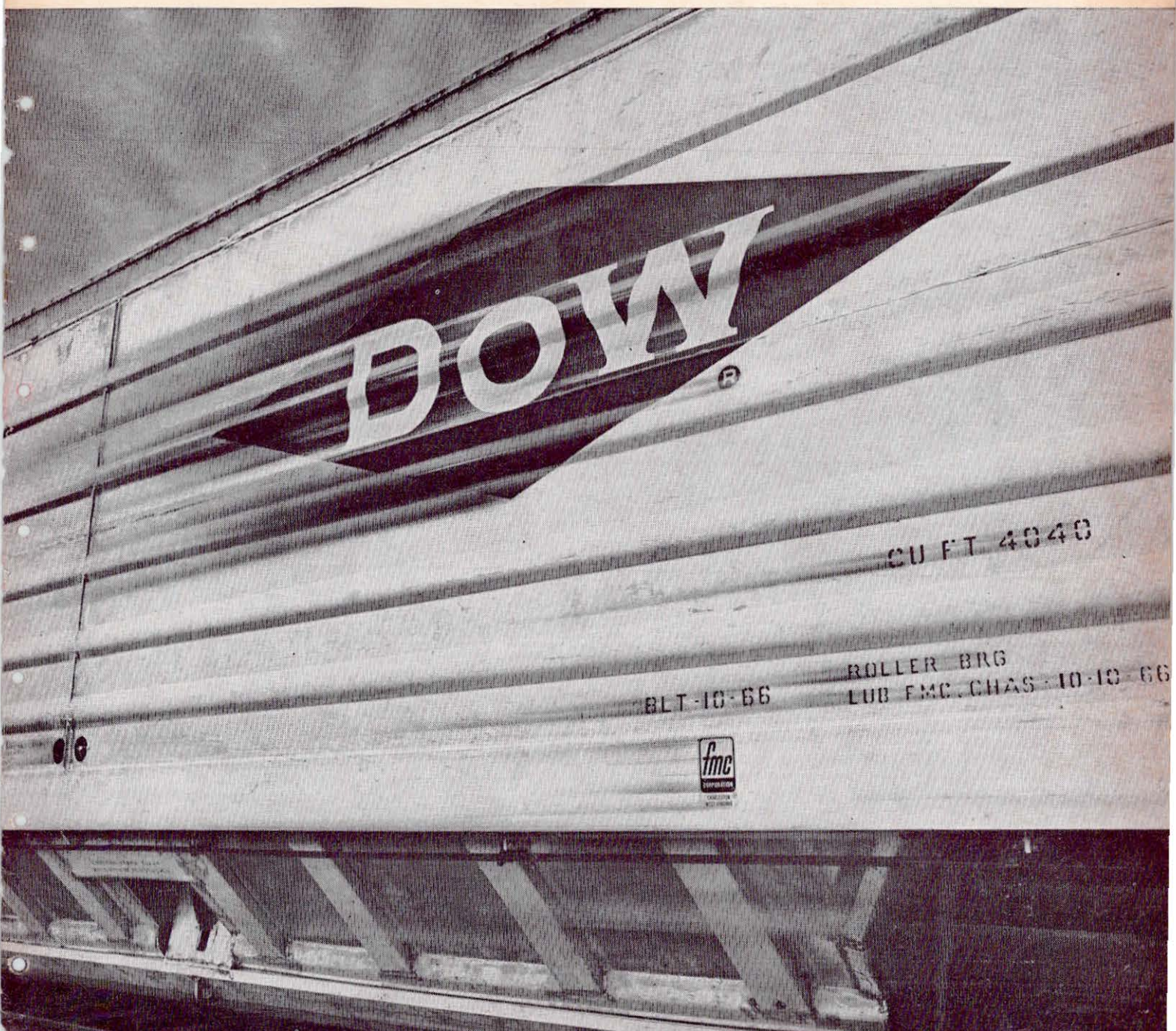

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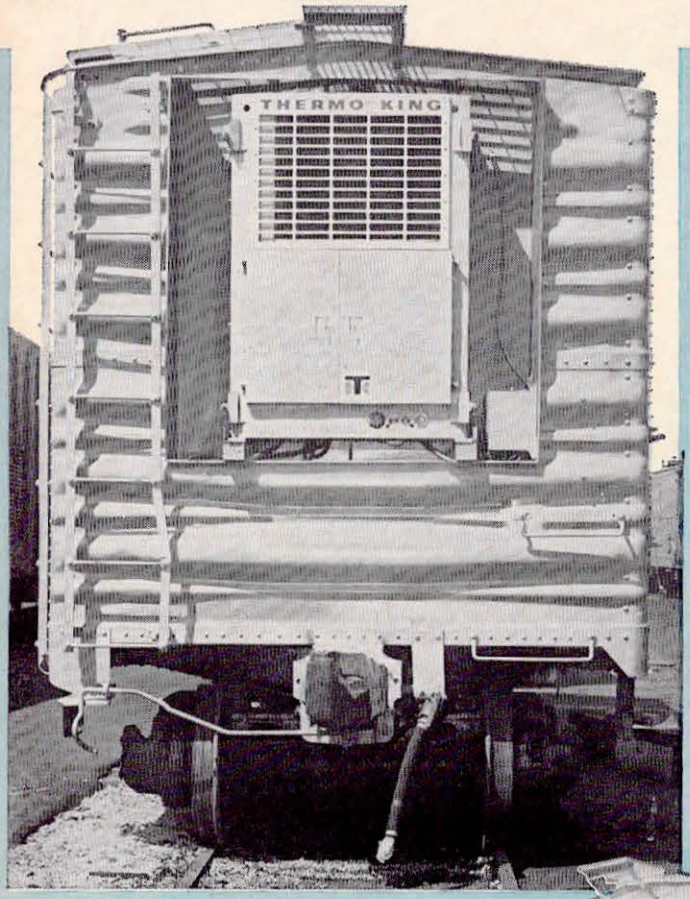

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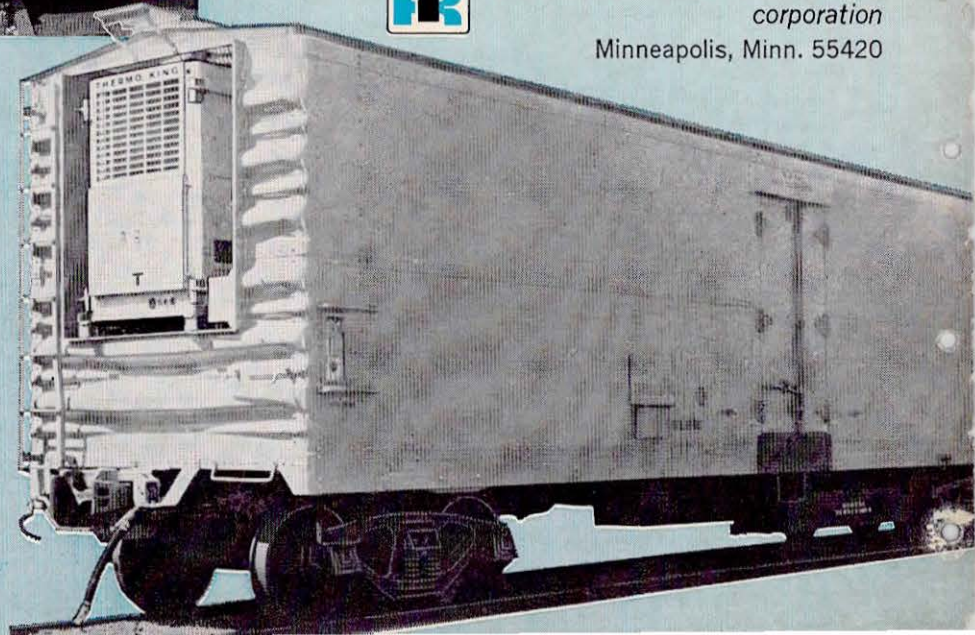

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34 Era of car cushioning began 10 years ago

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36 How shippers view an "assumed" rate boost

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SHORT AND SIGNIFICANT

Air-transit link for Tampa

Westinghouse Electric will supply a "passenger transport system" for the new Tampa International Airport by 1969. Basically an adaptation of the Skybus concept demonstrated in Pittsburgh, the system will consist of eight air-conditioned, rubber-tired, driverless vehicles that will shuttle between the main terminal and four individual loading terminals 1000-ft away. Vehicles will be electrically propelled, will have a passenger capacity of 100 (including standees) and will make the trip in 40 seconds.

●

New Haven unions sign Penn-Central agreement

Job-protective agreements covering some 9,600 New Haven employees have been signed by the employees' representative labor unions and the Penn-Central. The agreements, basically attrition arrangements, preserve the employment of present NH employees in the merged company, except in the case of resignation or retirements, and stabilize employment during minor rises and falls of business. The coverage, according to Guy W. Knight, PRR vice president, labor relations and personnel, is the same as that provided by the merger protective agreement between the Pennsylvania and New York Central. Cost of the New Haven agreement is estimated at $14 million, spread over a number of years because the principal protective device is attrition.

●

Railroad safety report

Ten passengers were killed in train accidents and one was killed in a train-service accident in December, according to a preliminary report of the ICC's Bureau of Railroad Safety and Service. The ten fatalities occurred in a single accident when a Boston & Maine RDC hit a tank truck stalled at a grade crossing (RA, Jan. 23, p. 14). In December 1965, passenger fatalities involved one person killed in a train-service accident. For the 12 months ended Dec. 31, 10 persons were killed in train accidents, and 13 died in accidents connected with train service. Thirty-nine passengers were injured in December train accidents and 75 were hurt in train service accidents that month. In the same month, 19 employees were killed and 1,594 injured, compared with 18 killed and 1,589 injured in December 1965. For the 12-month period of 1966, 162 employees were killed, 18,022 injured, compared with 172 killed and 18,644 injured in the corresponding period of 1965.

●

AAR is honored for International cooperation

The Agency for International Development has presented the Association of American Railroads its Certificate of Cooperation for its assistance in providing training for foreign participants sponsored by AID. The award was recommended by John DuBois, Program Development Officer in the Office of International Training, who arranged for placement of Korean railroad trainees last summer with AAR officers. The award was made to R.R. Manion, vice president, operations and maintenance, AAR.

●

LBJ sets date for Transportation Week

President Johnson has designated the week of May 14 as National Transportation Week, and May 19 as National Defense Transportation Day. In his proclamation, the President gave the new Department of Transportation a plug, saying it will help the U.S. transportation industry to develop new techniques and better integration of service "to assure the nation the best, the most economical and the fastest transportation service the world has ever seen."

MONDAY MORNING REPORT

Canada has a new Transport Act

The railways of Canada have spent eight years arguing for revision of federal transport legislation. Their big gripes sound very similar to those heard south of the border: favoritism shown to highways and waterways; antiquated subsidies and rate-making legislation; discouragement of attempts to make competitive rates, to abandon uneconomic branch lines, to get ride of chronic money-losing passenger trains. But in Canada, they've made some progress: Parliament acted favorably on the omnibus transportation bill that puts all modes in the country on a new basis.

One-up for the rails

Transport Minister Jack Pickersgill was responsible for steering Bill C-231 through the shoals of committee investigations, tabling motions (which held up action in previous Parliaments for years), and sundry objections from spokesmen for other modes. Some compromises were reached in order to get the bill through, but the basic rationale remains what it was from the beginning: restore competition to transportation. And this, in spite of loud cries from truckers and a few isolated shippers (not the Canadian Industrial Traffic League) that the railways would reap big competitive advantages from the new statute.

How it will operate

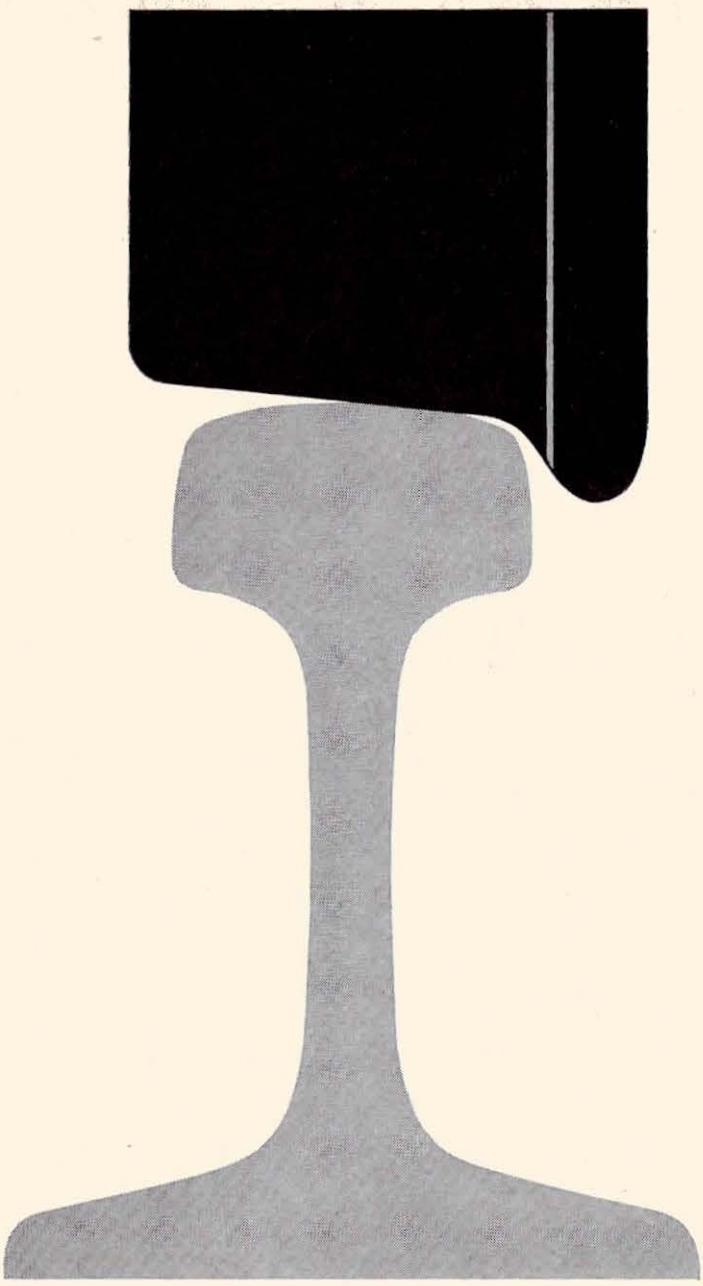
The new legislation sets up a 17-member central agency, the Canada Transport Commission, which will have broad supervisory authority over rail, air, truck, waterway and pipeline traffic. This replaces the separate agencies that previously kept an eye on each mode (the Board of Transport Commissioners for the railroads, the Air Transport Board and the Canadian Maritime Commission), and extends regulatory authority to inter-provincial truckers and commodity pipeline operators (Oil and gas remain under the Energy Board). The statute empowers the new Commission to exercise jurisdiction over all modes as noted, to make investigations as and when necessary, and to make policy recommendation to Parliament on all matters relating to transport.

The goal: more competition

For the railways in Canada, the most important aspect is that the core of the recommendations in the MacPherson Royal Commission reports of 1959-63 has now been adopted. This Commission held that "Management must be free to manage,'" that "railways should be left to make rates which will obtain the traffic in the competitive area as long as the rates are compensatory," and that "We look forward to the day when, because of effective competition throughout the nation, maximum rate regulating machinery may be scrapped completely.'"

It's not all roses, but—

Passage of the new legislation is not an unalloyed success for the railroads. Canadian National and Canadian Pacific spokesmen voiced objections to several provisions: Too-rapid withdrawal of subsidies before competitive rate-making can take full effect, unsatisfactory machinery for appeal of decisions by the new Commission, and insufficient safeguard against the danger that the new Commission might eventually take on aspects of the U.S. Interstate Commerce Commission—i.e.—attempt to protect the status quo in detail. Never-the-less, the creation of the new body was welcomed by CN and CP officers. N. R. Crump, chairman and chief executive officer of CP, said "The new law represents an historic break with the past."



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WEEK AT A GLANCE

HUD announces four transit studies

Dr. Robert C. Weaver, Secretary of the Department of Housing and Urban Development, has announced award of four contracts totaling $1.5 million, for studies related to improved mass transportation. The WABCO Mass Transit Center received a contract covering "Evolutionary Study of Substantial Improvements in Existing Urban Transportation Systems and the Emergence of New Systems," with solutions available in from three to eight years (subcontractors will be WABCO subsidiary Melpar, also Wilbur Smith & Associates, and the Institute for Public Administration).

Day & Zimmerman, in association with FMC Corp., received a contract for a "Utilization Study of Methods to Obtain Improved Results from Existing Transportation Technologies"—a crash program to seek improvements that can be introduced in six months to three years. Defense Research Corp. received a contract for systems analysis that also encompasses city planning. Stanford Research Institute was awarded a contract for a "Futuristic Study of Ideal Technological Solutions to Urban Transportation Problems," with solutions available in from five to 15 years.

Net income for 1966 is below early estimates

Net income of the Class I railroads last year turned out to have been $902 million. This was less than the year-end estimates, which put the prospective net at $925 million. It is never-the-less the best showing since 1955's $927 million. It compares with 1965's $815 million, and with a post-1955 low of $382 million in 1961.

Last year's net railway operating income, at $1,046 million, topped $1 billion for the first time since 1956. It compared with 1965's $962 million.

Changes at the top on Monon and DT&I

The Monon has a new chairman, president and chief executive officer, and the Detroit, Toledo & Ironton has named a new president. Assuming all three titles on the Monon is Samuel T. Brown, a member of the road's executive committee and a director since 1956. He succeeds William C. Coleman, top officer of Monon since the early 1960s, who chose not to be a candidate for re-election at the April shareholders' meeting.

The new president of the DT&I is Charles L. Towle, who has been serving as director of industrial engineering for the DT&I's parent, the Pennsylvania. He takes over from John E. Chubb, president since 1963, who returns to the PRR as vice president-Baltimore. Towle has been at PRR system headquarters since July 1965, and formerly served as vice president-operations for the DT&I.

On the Monon, Coleman's stewardship may be tough to follow. As he puts it: "Monon was brought from the verge of bankruptcy to a money-making, dividend-paying railway in six years. Monon is in first class on all counts." Last year, for instance, freight revenues were up 9% over 1965 levels—and net income climbed by 35% to $1.7 million. Coleman will remain as a director and member of the Monon's executive committee.

Canadian transportation regulations to be revamped

Major changes in Canadian transport legislation will go into effect as soon as the government proclaims an effective date for a bill recently passed by Parliament.

The bill established a new national transportation policy, creates a "super" regulatory commission, and virtually wipes out regulation of transport rates (see p. 8).

ICC considering rules for carrier use of super-highways

Proposed rules governing the transfer of motor carrier operations from present routes to roads of the national system of interstate and defense highways have been recommended to the ICC by Hearing Examiner Samuel C. Shoup. The recommendations came in Shoup's report, Ex Parte No. MC-65, the proceeding instituted by the Commission two years ago for the purpose of developing deviation rules.

Shoup recommended a case-by-case approach, i.e., that highway common carriers and contract operators be required to obtain new certificates and permits respectively, to operate over the superhighways. Except for this, the proposals are not substantially different for the Commission's present deviation rules which have been in effect for several years but did not contemplate operations over superhighways of the national system.

Generally, the proposed rules are designed to insure that no truck or bus operator uses them to perform services materially different from those offered on its present routes. Another aim is to guarantee continued service to intermediate points and previously served points off the superhighway. Thus, the proposed rules include circuity limitations, and they call for firm commitments to serve the intermediate and off-route points.

The proposed rules seem to reflect the examiner's favorable consideration of a presentation made in the case by the AAR. As summarized in the recommended report, that presentation said the rules "should not provide for the grant of authority to perform a new service, but merely afford a means of improving an existing service."

GUS WELTY'S LINES ON LABOR

WELTY

THIS STORY is not fable, not parable, not even allegory. Webster demands that fable and parable tell truth through fiction; allegory demands the veiled approach of a Bunyan (John, not Paul). This tale is true; and it deserves telling in the simplest terms. It concerns labor relations—and how they can be conducted when negotiators on both sides have the well-known nobleness of spirit and practicality of mind to try to agree rather than to practice the three B's—blocking, badgering and baiting. It concerns a minor incident—with a major moral.

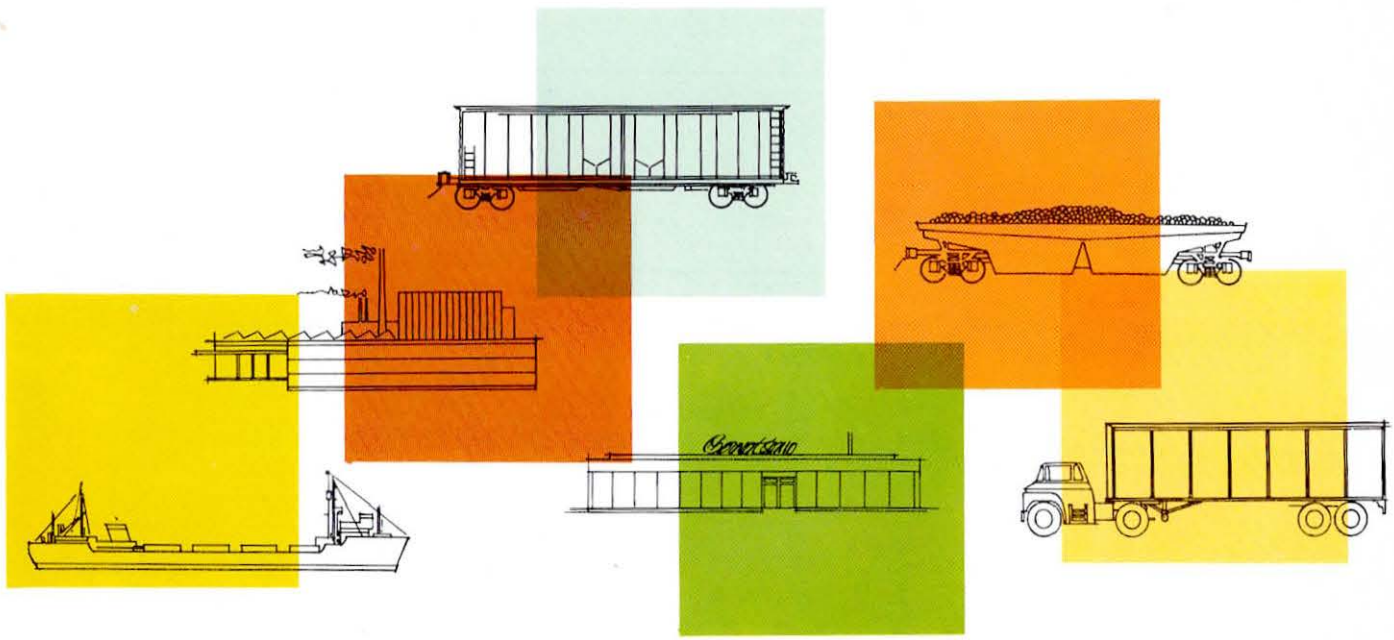
"ONCE UPON A TIME, there was a big, broad agreement, reached after long debate. The trouble was that after it was signed, nobody was quite sure what it meant. So there was another agreement arrived at, and this one was supposed to explain the first one. The trouble now was that some people found out enough to make them doubt that the over-all agreement was practicable in actual application. So they decided to sit down and hatch out a deal which would be acceptable to all and which could be put into operation easily.

A UNION OFFICIAL SPEAKS: "Well, we worked this thing over for a few months—I guess about six months from the time we first started talking till we had an agreement. Then we found out that our people and their people were both taking way-out positions, sometimes, when they applied it. So we decided to have a meeting, with our local officers and the carrier's supervisory people there in the same room. And the carrier's labor-relations man and I sat up front and we explained the thing and we fielded questions. I guess there was some kind of a psychological thing working—we were up there, side by side, and people saw we thought the agreement could work. I don't know exactly what it was—but I can tell you that since that meeting, we haven't had big troubles in handling the agreement."

SO THAT'S FINE—but would things like this work generally in management-labor relations? A smile comes and goes, and the union official speaks again: "You know as well as I do that an awful lot of union officers are in a popularity contest. They wouldn't be eager to be seen up there on a platform with a carrier officer like that. Somebody'd start saying the union guy was in the carrier's pocket, and he'd have trouble from there on out."

MAYBE UNION PEOPLE, from grand lodge on down, should take more note of this kind of operation. It happens occasionally—but probably not often enough. Today, the opportunities are there. On both sides there are perplexing problems —but there's also a new degree of enlightenment. And agreement can be reached—if there's an honest, mutual effort to make it so.

The inside story of Landreth Systems



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John T. Landreth

A message from the Chairman of the Board
and Chief Executive Officer

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John T. Landreth

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The Inside Story of Budd Report #2238

The Landreth Insulated Car equipped with Landreth's Pre-Molded Urethane Foam Panels has just undergone exhaustive tests. After six months of road tests, the car was tested in The Budd Company testing laboratories in Philadelphia.

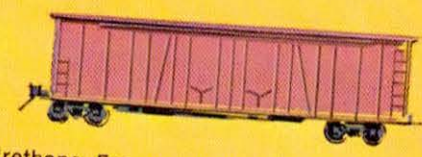
Here are the startling results from the Budd Laboratory's report.

The car constructed with the Landreth Pre-Molded Urethane Foam Panels was to be tested against two other cars constructed with Urethane Foam block. All the cars had been previously road tested for six months or longer.

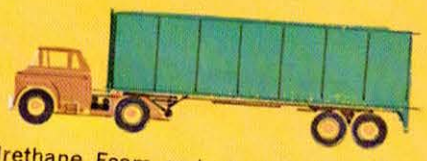
The Landreth equipped car had absolutely no air leakage, no hot spots, and no voids in the foam. In addition, at 100 degrees differential, the car built with the Urethane Foam block had a BTU average of 143 BTU's per hour. The car equipped with the Landreth Pre-Molded Urethane Foam Panels, also at 100 degrees differential and tested under the exact conditions, showed an average of just 93 BTU's per hour.

The Landreth Insulated Car was at least 50% more efficient than the car constructed with foam block. Conclusive proof that the Landreth Pre-Molded Urethane Foam Panel--is "Best by Test," both in road and laboratory testing!

Landreth systems have many diversified applications

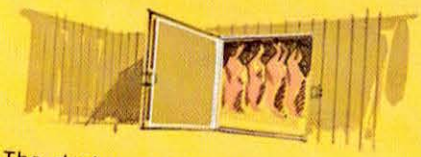


Urethane Foam and all Fiberglas Panels insulated box cars and mechanical temp ture control cars.



Urethane Foam and all Fiberglas Panels f tractor trailers.

Urethane Foam and all Fiberglas Panels for containers.



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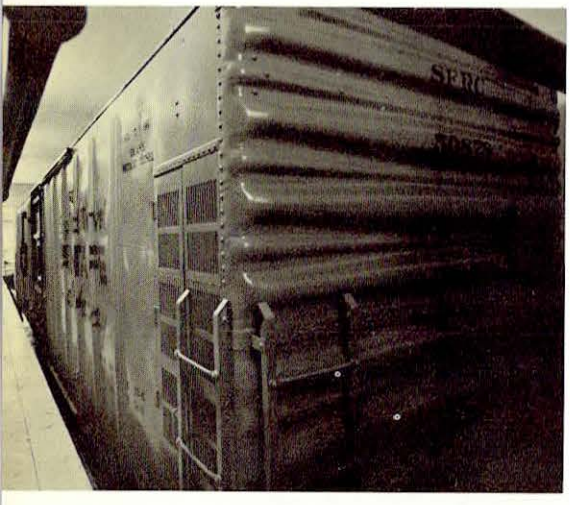


Landreth offers the most modern cold room testing laboratory in existence today. The cold room is 85 ft. long and is large enough to accommodate and test under controlled laboratory conditions the largest insulating cars of today and tomorrow.

Landreth engineers simulate extreme temperature variations. By testing the efficiency of various insulation materials, you are guaranteed the best possible insulation panel to suit your specific needs.

The cold room is constructed with Landreth prefabricated Urethane Foam Panels. And the control room is equipped with the most modern equipment. The Landreth cold room laboratory was set up in conjunction with and approved by the U. S. Bureau of Standards.

The cold room laboratory can measure temperature extremes from −30° F. to +180° F.

The Landreth engineers accurately measure heat loss by the direct heat flow method, the reverse heat flow method, and air leakage.

Features of the Landreth Pre-Molded Urethane Foam Panels

- No air infiltration
- No localized hot spots
- Non-Burning foam
- Easy repairs
- Seamless vapor barrier

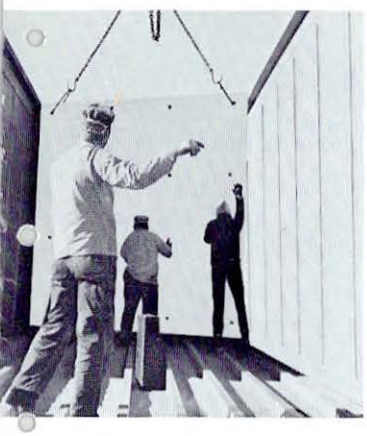
Landreth offers the most modern research and development facilities

A well equipped laboratory to test insulation properties, strengths, and efficiency of insulating materials.

A complete and thoroughly experienced engineering and design staff is available to solve your design and construction problems relating to insulation.

The Landreth system reduces Labor cost and increases efficiency

The new Landreth System enables the builder to provide the most efficient insulation without the necessity of installing equipment and costly facilities. The system provides a more efficient insulation with greater capacity and is much faster to build.

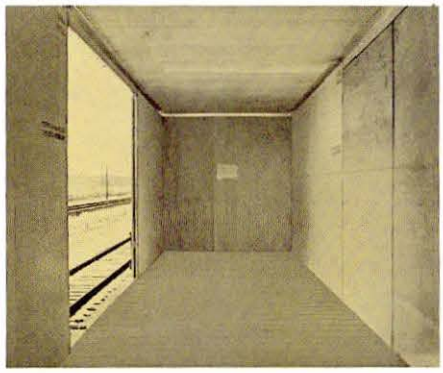


Landreth Pre-Molded Urethane Foam Panels are the most efficient on the market.

Landreth revolutionized the development and application of insulation materials in the railroad industry.

Workman lowering side panel into place.

Workman fastening "Nelson" stud to outside post. Insulation thickness is reduced by ½ over conventional insulation materials.



End panel being lowered into place. Panels are moved into production line on flat cars and lifted into cars by cranes.

All joints foamed to insure complete air-tight car. Only fourteen panels are required per car, cut to size and ready to bolt into place—six for the sides and ends, two for the doors, three for the ceiling and three for the floor.

- Greater thermal efficiency
- Thinner walls
- Completely prefabricated
- Guarantee no voids
- All joints foamed

- No moisture absorption
- Odor free and non-toxic
- Fungus and rot proof
- Added structural rigidity

- Improves with age—does not deteriorate
- Fire proof
- Does not spread or settle from load vibration or temperature change

These major corporations have experienced the money-saving efficiencies of the Landreth system

The Landreth System has proven itself to be "Best by Test." These are but a few of the corporations that have utilized the knowledge and services of Landreth Industries to solve their insulation problems. Each problem and opportunity presented a different insulation application.

Landreth's Spectacular growth
clearly demonstrates the ability of Landreth's technological knowledge of solving insulation problems.

Landreth
INDUSTRIES, INC.

2100 Greenwood Avenue • Evanston, Illinois • Phone: 328-2062

These dedicated executives direct the successful management of Landreth Industries

JAMES GRIFFIN, JR.,
President

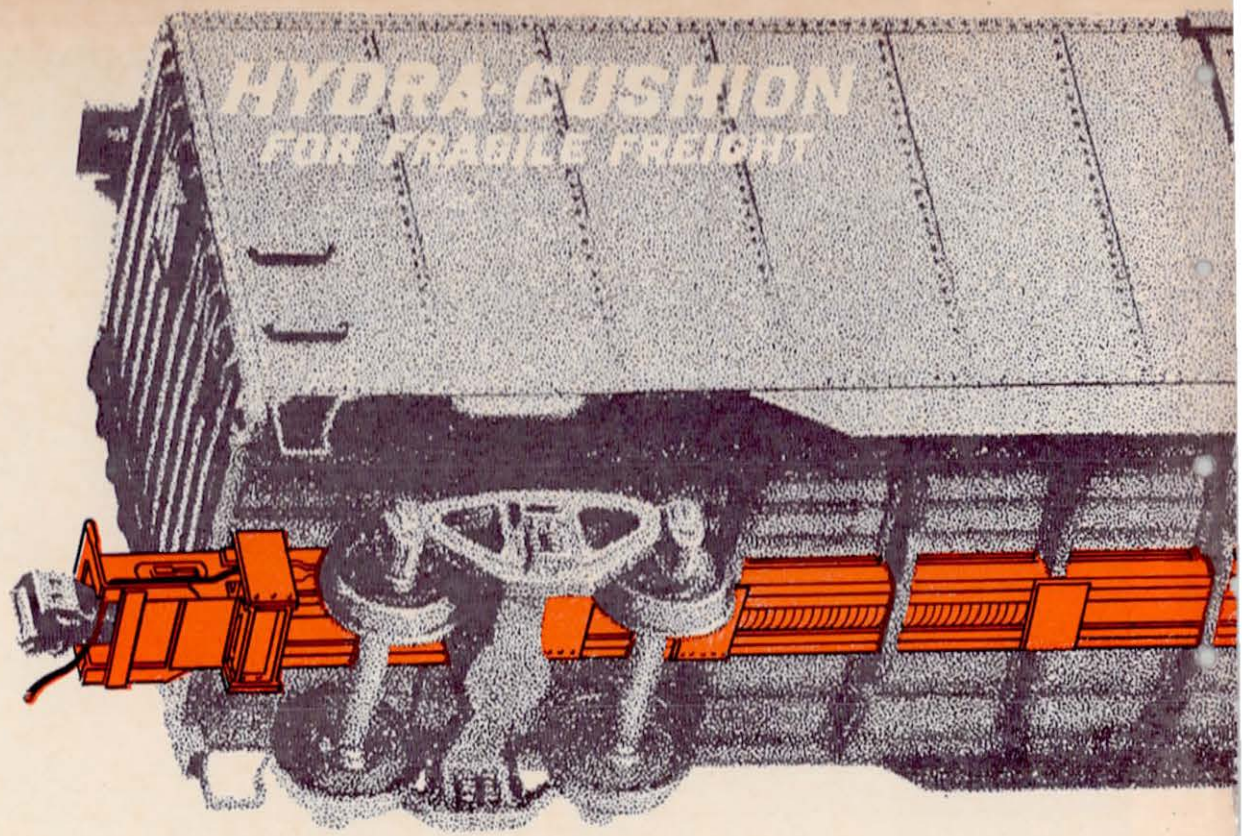
THOMAS BLICKLE,
Vice President and
General Manager

DODGE FREEMAN,
Vice President Sales
Trailer Division

ROBERT BLICKLE,
Sales Manager
Rail Division

ERNEST JAUL,
Vice President
Production

DONALD CURTIS,
Treasurer



21 reasons why you should

(1) **Extra margin of cushioning safety**—Unlike other systems, the Hydra-Cushion Underframe does not rely on hydraulics alone, but on a *combination* of hydraulic and mechanical cushioning action. The mechanical components alone can cushion a fully loaded 100-ton car against impacts up to six miles per hour! The combined hydraulic/mechanical system absorbs the full range of impacts normally encountered in modern freight car handling. This is added insurance against lading and car damage.

(2) **Unique conversion feature**—When you convert 100-ton cars with 70-ton trucks to 100-ton cars with 100-ton trucks, the only conversion necessary in your Hydra-Cushion Underframes is simple replacement of a metering pin costing less than 10 dollars! The Hydra-Cushion Underframe is the only cushioning device offering this unique feature.

(3) **Long years of proven performance**—Hydra-Cushion equipped cars were introduced in service in 1954 and have since been proven over many millions of car miles.

(4) **True sliding center sill**—Provides full 20" travel, assuring performance that only a true sliding center sill can provide.

(5) **Low hydraulic pressure**—The Hydra-Cushion Underframe is a low-pressure system, minimizing maintenance problems.

(6) **Minimum hydraulic fluid**—Only seven quarts of fluid is needed for the Hydra-Cushion low pressure hydraulic system. Checking of fluid levels is not required.

(7) **Most powerful return spring**—Cushioning capacity of the Hydra-Cushion return spring is 45,000 ft. lbs., an exclusive Hydra-Cushion feature. This powerful spring has more than twice the capacity of standard draft gears.

(8) **Less wear on sill**—The stiffer the return spring, the less wear on sill contacting surfaces. The return spring assembly of the Hydra-Cushion Underframe is substantially higher in capacity than those used in any other modern hydraulically cushioned device of the sliding sill type.

(9) **No sill lubrication required**—Some cushioner manufacturers recommend sill lubrication for optimum functioning of their equipment. The Hydra-Cushion Underframe does not need it.

HC®

HYDRA-CUSHION®

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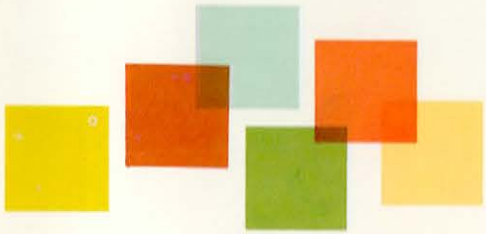

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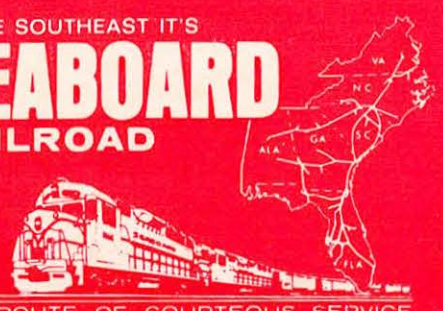

THE ROUTE OF COURTEOUS SERVICE

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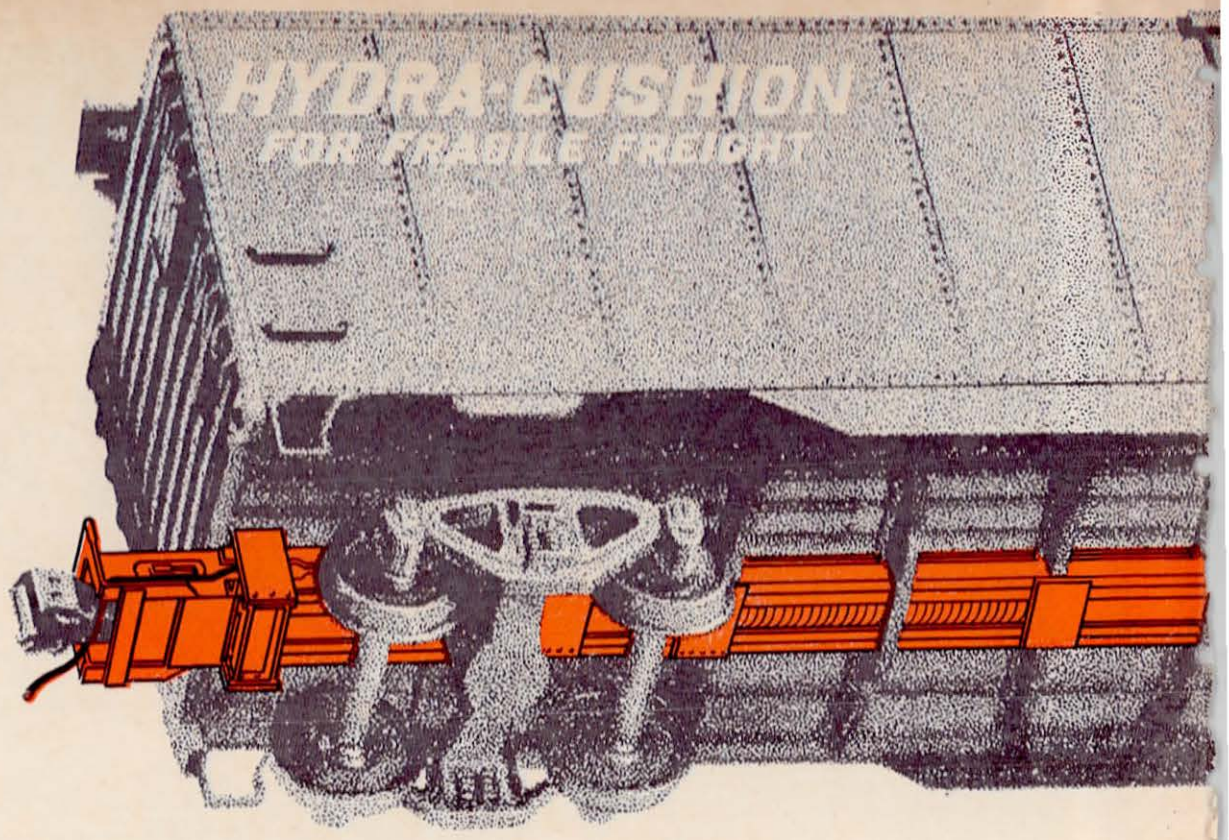

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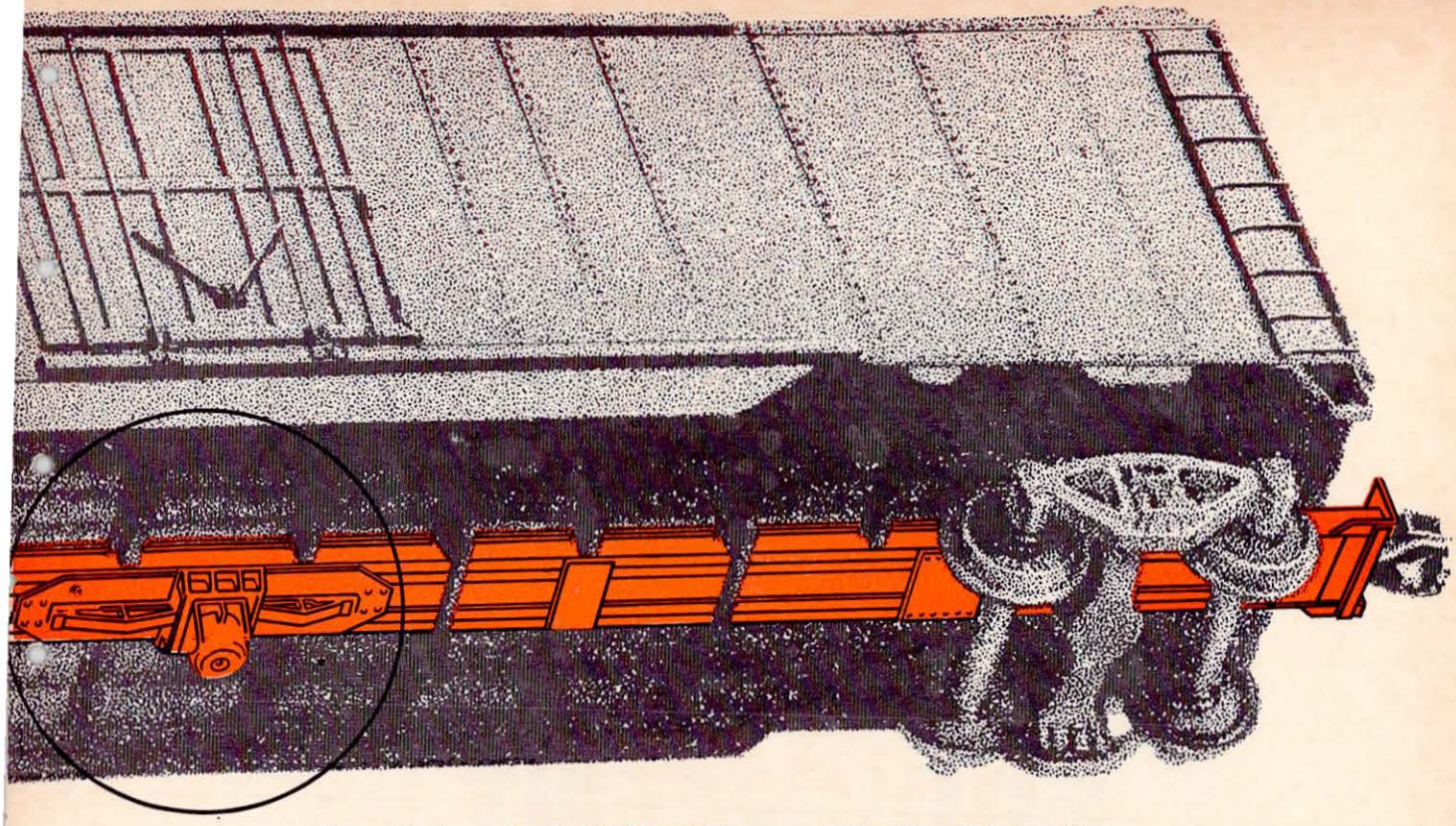
HC®

HYDRA-CUSHION®



This combination makes the big difference in car cushioning. The patented combination of hydraulic unit and friction plates in the Hydra-Cushion system provides an extra margin of cushioning safety. No other cushioner has it. This is one of many reasons why the Hydra-Cushion Underframe is America's leading car cushioning device.

specify Hydra-Cushion® Underframes

(10) **No oil leakage**—The Hydra-Cushion design employs a vertical low-pressure hydraulic cylinder. Upright position of the oil reservoir eliminates possibility of oil dripping which is sometimes encountered with horizontal units.

(11) **Sill movement controlled**—Oversolid stops control maximum draft sill movement to 20" in either direction.

(12) **Permits controlled swing of coupler**—The Hydra-Cushion buff unit produces a minimum of coupler slack. It has a cushioning capacity of 22,000 ft. lbs.

(13) **Cast steel center support**—Rugged cast steel center supports are designed and engineered to last the life of the car.

(14) **Positive sill return**—Design of the Hydra-Cushion return spring assembly assures positive sill return after impact. Sill does not stick off-center.

(15) **Reduced sill oscillation**—Design of the Hydra-Cushion unit minimizes fore-and-aft sill oscillation in train operation.

(16) **For any freight car**—The Hydra-Cushion Underframe can be installed in both new and existing freight cars economically.

(17) **Proven dust boot**—Dust boot is rugged and tough, and is designed for long life.

(18) **Reduces car weight**—Use of Hydra-Cushion Underframes makes possible a reduction in weight and cost of interior load restraining devices.

(19) **Long life, minimum wear**—The Hydra-Cushion Underframe's bronze stationary friction plates and high strength steel moveable friction plates are specially designed for long service. They have been proven in use in millions of car miles over many years.

(20) **Minimum seal wear**—Piston travel is shortest of any hydraulically operated through-sill device. Short piston travel reduces possibility of seal wear.

(21) **Service follow-through**—The Engineering Design and Consultation services we provide to railroads interested in car cushioning are a Hydra-Cushion exclusive. After a sale, our field representatives work closely with your installation people to assure that all components are installed properly and operate efficiently.

UNDERFRAMES

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Model of new type L&N 100-ton unit-train hopper car now being built by Pullman-Standard. The unique unloading arrangement is capable of dumping 100 tons of coal in 6 secs. and a 100-car train in 15 mins.

NEW EQUIPMENT

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What's new on the railroads? Plenty! Take freight cars, for instance. In 1966, 102,342 new cars were ordered–setting a new high for the decade and an all-time dollar-value record. And this resurgence is no flash in the pan. Carbuilders and handlers of accessory equipment for the past four years have enjoyed what has been all too rare in the past–continuous production stability. Surveys by industry groups reveal unprecedented demand for freight train car equipment extending ahead for the next decade.

The railroads are improving their competitive position with these potent new tools. Likewise, alert railway equipment suppliers are keeping abreast of an upsurging market with well-directed advertising in the Railway Age Group.

With Railway Age, their product story goes right along with the fast-breaking developments in the industry's own weekly, edited for and read with keen attention by influential top railway management. Rolling stock advertisers also get down to cases in the two monthlies–Railway Locomotives & Cars and Railway Purchases & Stores. Here they are in close rapport with the men who specify and buy, the department heads and supervisors in the all-important mechanical and electrical departments and the responsible P&S executive echelons.

Special note! Advertisers in the three magazines mentioned above are now eligible for the new Industry Marketing Rate offered by Simmons-Boardman Publishing Corporation. Your Railway Age Group representative will be glad to go over this with you. *Contact him now.*

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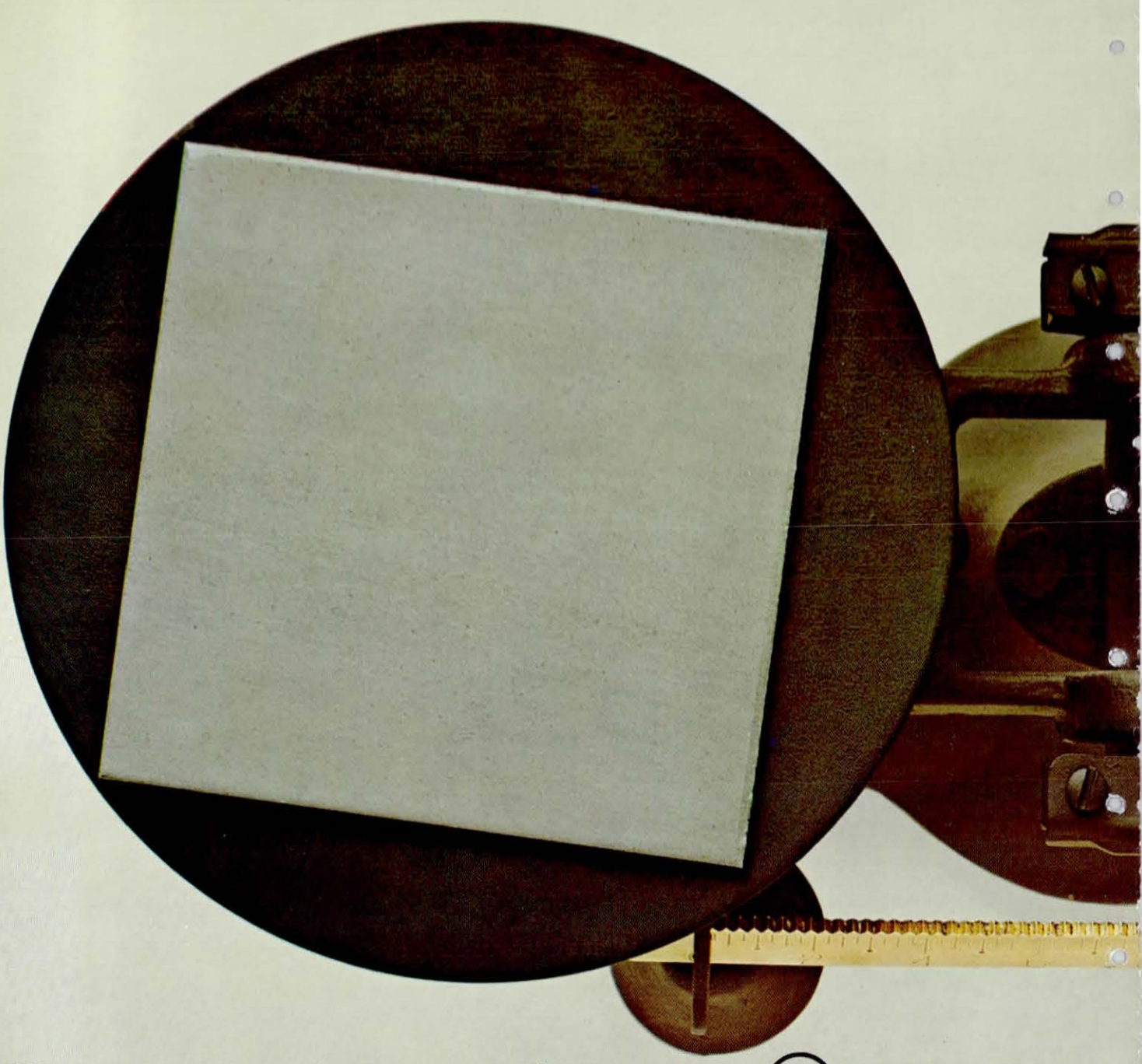


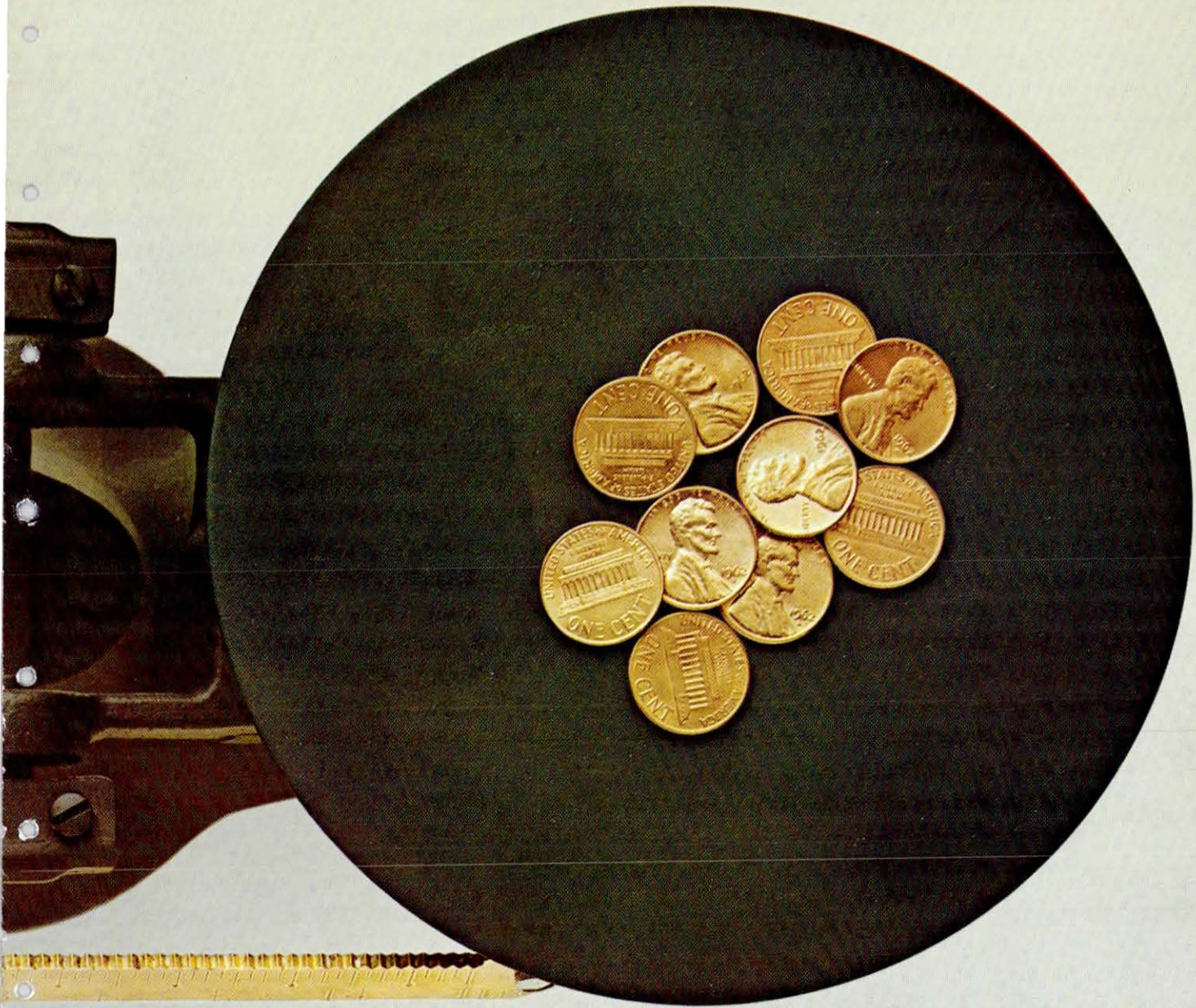
What this country has is a good 10¢ per lb. steel—USS Cor-Ten A Brand

USS COR-TEN A Brand steel is the original high-strength low-alloy steel with superior resistance to atmospheric corrosion. Since its introduction in 1933, hundreds of thousands of railroad cars have been built stronger, lighter, and more durable with this steel . . . *and the price per pound is under 10 cents!*

Some railroads used USS COR-TEN A Steel to cut car weight by 25% and boost payloads. Others wanted longer car life—and got it. Many of the USS COR-TEN A Steel cars built in the Thirties are still in service.

USS COR-TEN A Steel offers these advantages: ☐ Up to 50% greater strength than structural carbon steel (minimum yield point 50,000 psi) ☐ High strength-to-price ratio ☐ Price (average for structurals, plates, bars, sheets and strip)—about 9¢ a pound ☐ Modulus of elasticity (ratio of unit stress to unit strain) . . . 28 to 30 million psi ☐ Atmospheric corrosion resistance, 5 to 8 times that of carbon steel ☐ Paint life about double that of carbon steel ☐ Weldable ☐ High resistance to abrasion, denting, and rough usage. *What about the jumbo cars?* One major railroad has already used USS COR-TEN A Steel along with USS "T-1" and "T-1" type A Steels, USS TRI-TEN Steel, and Stainless Steel to build fifty 100-ton capacity hopper cars.

Steel . . . more strength, more capacity



Additional cars are currently being built to bring this fleet to 170. This combination of steels gives you maximum strength and ruggedness, plus increased payload capacity without exceeding weight limits. Stainless steel in the slope plates has cut unloading time to 28 seconds with no need for special unloading equipment.

□ United States Steel, through its research, is introducing about one new or improved product a week. The USS TENELON Stainless Steel 100-ton covered hopper car is a USS innovation. USS COR-TEN A and USS TRI-TEN Brand High-Strength Low-Alloy Steels are used in the structural members for strength with low weight. The car weighs 16% less than a conventional covered hopper car.

□ Moving freight calls for rugged equipment. COR-TEN A Steel's 33-year service record provides this assurance of reliability. Perhaps we can help. Call our nearest sales office or write United States Steel, Room 4263, 525 William Penn Place, Pittsburgh, Pa. 15230. Export Distributor: United States Steel International (New York), Inc., P. O. Box 75, New York, New York 10008.

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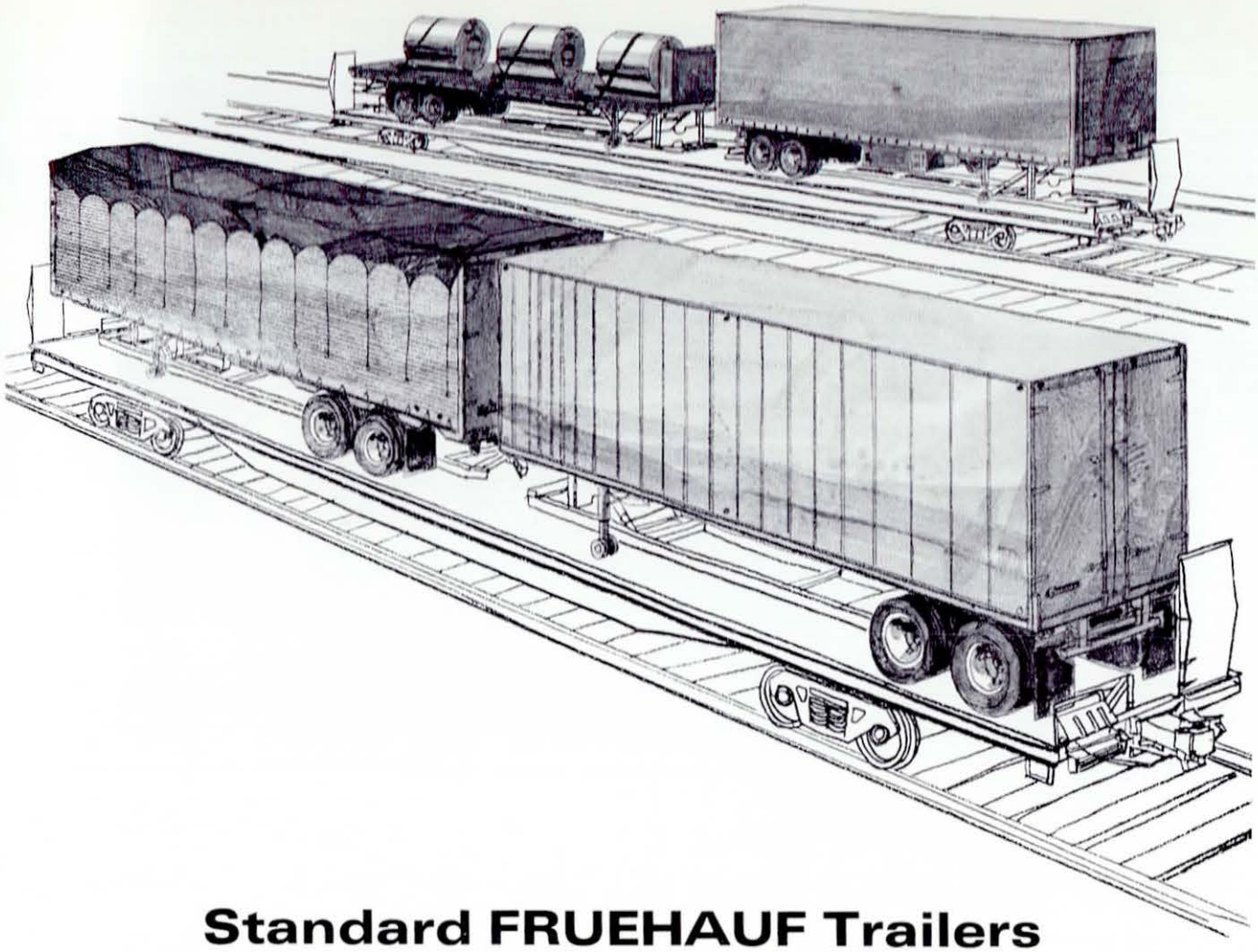

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ALLIED MILLS' A. E. LEITHERER SAYS

Car shortages can lose traffic permanently

Railroads are shutting off orders for new equipment, even as the Interstate Commerce Commission describes current car shortages as of "increasing severity and duration."

The reason? Severe economic penalties will be paid by railroads buying equipment between now and next Jan. 1, when the investment tax credit is slated for reinstatement. The carriers are slated for some weird economic disadvantages during the next 11 months. These disadvantages stem primarily from the suspension of the investment tax credit.

To examine the possible consequences of the present situation, Railway Age Western Editor John Mitros questioned A. E. Leitherer, general traffic manager for Allied Mills, Inc. On this and following pages Leitherer makes his analysis.

Leitherer is a 30-year veteran in distribution work. He heads the 35-man Allied Mills traffic force that controls the flow of some 50,000 carloads of traffic a year. The traffic force annually spends about $15 million buying transportation for the firm's 28 plants and operations in 40 states. Leitherer is an officer of the National Industrial Traffic League, the Midwest Advisory Board, the Chicago Traffic Club and the Illinois Territory Industrial Traffic League. He has the background and credentials to address himself to the car-supply problems that may be in the making for the last half of 1967 and the first half of 1968.

Q. Mr. Leitherer, how seriously will you be affected by the equipment situation as it promises to be later this year and early next year?

A. We'll be seriously affected, as will shippers in other industries. If the carriers reduce orders the way it looks as though they're doing, it will result in last year's equipment gains being wiped out—and then some. With retirements holding at the levels of the last decade, it might mean an absolute reduction in the size of the carfleet by many thousands of cars.

Not that I blame the carriers for what they're doing. The economics handed to them by the Administration when the investment tax credit was suspended last fall are pretty brutal. I am sure individual decisions that make up the rail industry's decision in the matter are a matter of pure economics.

But, still, their decisions are going to trigger decisions and actions in the shipping community that can be detrimental to the railroads' long-range interest.

Q. In what way?

A. Well, all you have to do is examine thoughtfully the moves made by shippers under the pressure of equipment shortages in recent years. Here at Allied, we have reacted to such pressure positively—we had to. We have to service a growing business—our gross has climbed from $120 million in 1962 to about $200 million currently. And we have to have the transportation one way or another. We've put some of our tonnage in barges where we could. We've expanded our own fleet of trucks. And, we've expanded our fleet of leased railroad equipment.

We've even taking a look at what's involved in outright acquisition of our own equipment.

Over-all, and immediately, we apply all the pressure we can on the roads able to help us. We've put great pressure on the railroads we do business with. But even with our leverage, we

still have to lease cars for ourselves—and examine alternate possibilities should the situation get any tighter.

Q. Are there other pressures behind this scanning of alternate possibilities—pressures from factors other than equipment shortages?

A. I should say so. The changing nature of our business at Allied Mills forces continuous innovation. We have to move greater and greater quantities per unit—which means we have to operate with some narrow tolerances between carrier unit capacities and the operating and commercial capacities of both our own production facilities and the facilities of our customers. New equipment such as piggyback reefers for our poultry traffic, covered hoppers for our feeds, and other equipment designed to accommodate movement and handling of bulk materials are, in conjunction with changes in incentives in the rail rate structure, central to much of the innovating taking place at Allied Mills.

And, while we normally scan alternate possibilities for maximum distribution effectiveness, the present equipment outlook is giving a special urgency to such activity.

Q. At Allied, what specific action is possible to reduce over-all pressure for equipment?

A. Well, it is difficult to speculate about speculative outlook. I feel the railroads may not continue to sit on their hands with orders to the extent they now appear to be doing.

But there is one aspect about such reaction that is rather easy to analyze. Whatever the reaction is, it will have long-term consequence for the railroads.

Q. How?

A. Well, take the matter of our tonnage in private carriage. It represents both traffic that is better handled by our own equipment—and also tonnage that travels in our own bottoms because we have the trucks. In other words, if we are forced to expand our fleet of some 350 units, there will be a carry-forward of effect on traffic that will extend over whatever time period Allied commits itself to by investment in such distribution equipment.

Similarly, when we are able to divert tonnage to barge handling, there is both time and money spent structuring the changeover. Inertia, if nothing else, would keep the tonnage there even if the equipment picture changes radically.

Lastly, and perhaps most importantly, really long-term decisions made by Allied to lease equipment for its own service will have to be based upon concessions in the rail rate structure and also in the ground-rules that govern both the payment for and the service rendered by such equipment.

Myself, I feel such use of leased equipment for more and more of the tonnage moving on the rails is inevitable—and desirable. Specialized equipment—and railroads never seem to be able to define what specialized equipment consists of—continues to take a bigger and bigger bite of rail capital spending. They've gone overboard buying piggyback equipment in recent years—and perhaps have unduly squeezed people in other vital traffic areas.

Q. For example?

A. The grocery people — and others who use the box cars equipped with dividers and sidewall fillers. Also the businesses that use covered hoppers, the fertilizer and other bulk commodity folk, are going to be feeling an increasing squeeze. The impact of what seems to be ahead will also be substantial on users of Class A and B box cars. Despite the flow of tonnage into covered hoppers in recent years, equipment deterioration is going to be a substantial factor in the months ahead.

Q. To get back to Allied Mills' situation, what actions are likely to have taken place if a 12-month lag in equipment acquisition actually develops as a result of the investment tax credit suspension?

A. What we have done historically and what we are doing now is to turn to private carriage in the main. Our investment in trucks is long-term. Such investment locks you in for a long time after the equipment squeeze that triggered the decision is over.

In a time of equipment shortage such as may be indicated by carrier reaction to the suspension of the investment tax credit, we can't be expected to slacken our own business. We, like every other affected shipper, will look for alternatives. We're already growing at a rate that is imposing severe strains on our distribution capability—and we contemplate increases in the food sector's tonnages that will make present tightness in equipment supply seem mild by comparison. In short, we are forced to seek relief wherever we can.

Q. Are there possibilities in sight on the rail side from service or equipment innovation that promise to reduce Allied's anxiety in the matter?

A. Sure. There are exciting possibilities that may open for the food industry generally—and Allied particularly—

from bulk handling techniques such as have already taken form in the general area of containerization and terminals geared to automated—or perhaps semi-automated—handling of such traffic flow from producer to terminal to customer.

Further, there is some promise in the analysis of the economics involved in terminal bulk installations so as to create a buffer between producers and users—installations that will enable a company like Allied to send stuff and store it for a distribution cycle based upon equipment larger than could be used by average customers, and available for local hauling as needed.

But all of this requires investment from both shipper and railroad. Whatever we do has a long-range commitment. We develop in certain ways that may or may not be favorable to the carriers. We at Allied—and I know all other shippers operate the same way—zero in on the best possible system for our own business. If we develop a system that is unfavorable to the railroads, it may last for years—or at least until investments are justified.

Q. How about innovation on the service side?

A. Service, of course, is another important facet of the problem that seems to be in the making. Railroads don't give proper turnaround service for the leased equipment we already have.

As example, one of our plants used rail service for 98% of its tonnage 15

"What we have done historically and what we are doing now is to turn to private carriage in the main."

years ago. Now it's 40%. Not that all of it was caused by service problems. We're handling tonnage with some of our own trucks—because we have them. The flexibility of trucks for short-haul traffic, of course, tends to cinch this kind of handling—I know of no way for the rails to get that portion of the business back.

So, that is another thing that plays a part in the problem we may face in the months ahead. They'll have to iron out service patterns acceptable to the companies that are willing to lease or buy their own equipment.

Q. You feel there will be more and more leasing as a way around whatever deficiencies in supply are generated by the lapse in carrier equipment orders that looks likely this year?

A. I don't see any alternative—for the shippers who cannot go to private carriage or to water carriage. I feel the economy will continue to operate at a high level for the period when the pinch of this year's hiatus in equipment orders will be felt by the shippers. Business and traffic in the food sector of the economy is going to be very heavy. There will be great demand for more equipment and better equipment. And there will be more and more demand for better handling of leased equipment —along with the rate and rule concessions shippers will have to have before they step in and start bankrolling some of the rail industry's carfleet.

I am certain there will be more and more such leasing, by the way. And it will be a good thing for the railroads. It will prevent them from spending hundreds of millions of dollars on equipment that, largely, is useful to only one shipper. The carriers need to create more incentive rates for commodities to encourage such leasing—and help us, the shippers, develop better distribution patterns. They also need to jack up service to allow shippers to tailor operations to predictable deliveries. At Allied, we are always just a day or two away from chaos—should distribution schedules go wrong.

Benefits to the railroads extend beyond the massive capital help they would get in financing tomorrow's railroads if shippers started leasing cars in substantially larger numbers. Cleaning problems, loading and unloading times, all change when a shipper leases his cars.

And there seem to me to be possibilities for groups of shippers leasing equipment pools for their needs. When commodities are compatible, there can be emphasis on such cooperative endeavors.

Q. You paint an intriguing set of possibilities, Mr. Leitherer. What carrier moves would reinforce such possibilities?

A. As I said earlier, railroads have to develop some better ways of making a shipper whole on such action.

Recent contemplated action on mileage rates for leased equipment would help and should be put into effect now. But, even that won't defray a shipper's entire costs. This situation, in view of the even more complex, costlier cars that are ahead, is bound to get worse. Right now, shippers are paying a differential for convenience in many cases.

Carrier rules for leased equipment should be changed to make ownership convenient and rail-traffic oriented. Problems that stem from rules requiring assessed minimum weight to be based upon the full visible capacity of the car penalize shippers in certain situations. Some—many—customers can't handle large loads.

Carriers need to give somewhat on rules that will help promote leasing by obliging shippers' customers. Maintenance rules are, by and large, no problem at all—the carriers do a good job mechanically. In the matter of mileage allowances, the carriers might score if they tied a more realistic mileage allowance to loaded miles—thereby locking their customers into the industry effort to improve equipment utilization.

Weighing processes and rules need to be improved. Something needs to be stated in tariffs to specify weighing procedures so as to straighten out some hairy claims situations that exist.

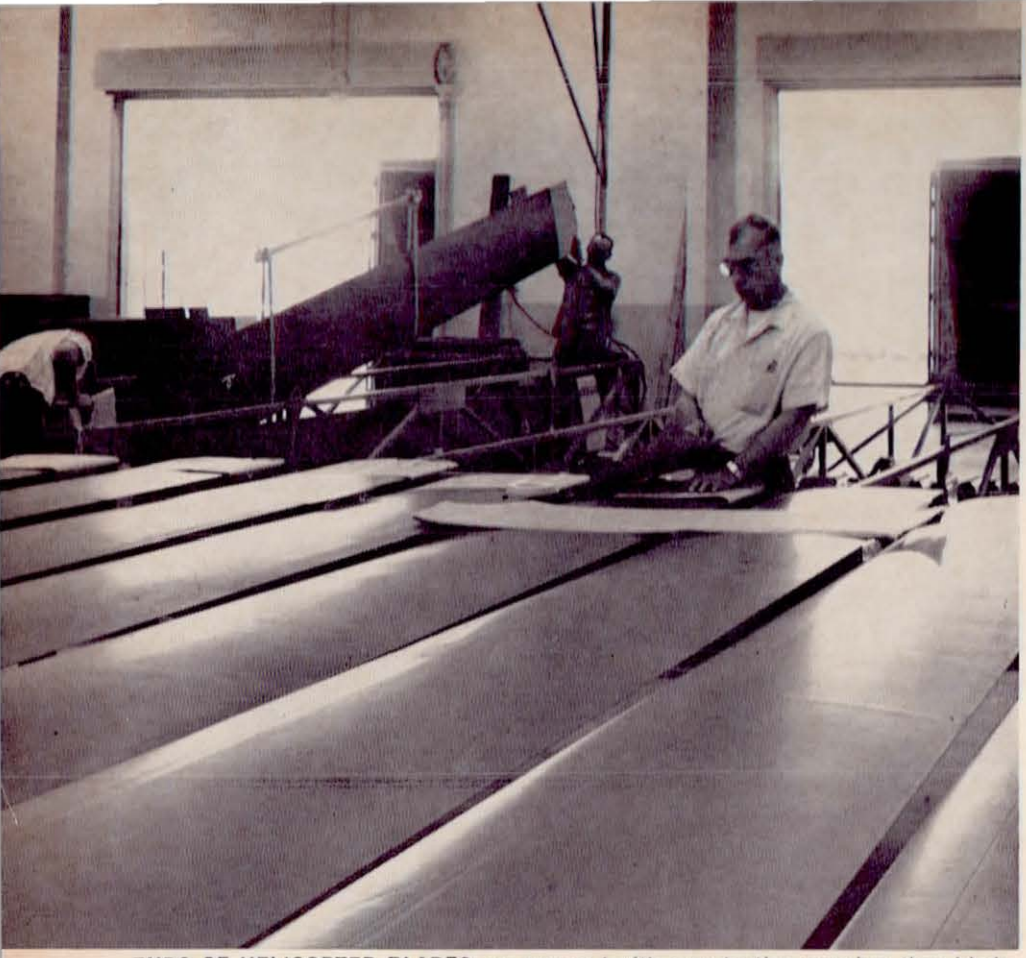
Q. Where do you start on such complex changes?

A. Well, I imagine the framework of the Advisory Boards is the place to begin. Joint action is needed.

Fact-finding groups composed of both rail and shipper experts need to explore this entire matter of equipment to find the most rational approaches to dealing with such shortages as we've already had for the past 40 to 50 years—and the squeeze that is likely to result from carrier curtailment of orders as a result of the Administration's suspension of the investment tax credit. By and large, such cooperative activity has always flopped in time past. The carriers, it seems to me, support joint action with rhetoric rather than action. Shipper Advisory Board sentiment, on the other hand, to the effect that if carriers get into SAB activities they will dominate the group—is silly. There is no way the railroads can do that.

I think railroads have used the investment tax credit to make a start on the equipment shortage problem. If the Administration hadn't pulled the rug out from under them, they'd still be making headway. Still, I think the railroads are making a mistake to falter after such a start. Shippers are going to be sympathetic at the brutal economic impact of the suspension—but they'll go right ahead with whatever they've got to do to get around whatever bind equipment shortages cause to their distribution needs. ■

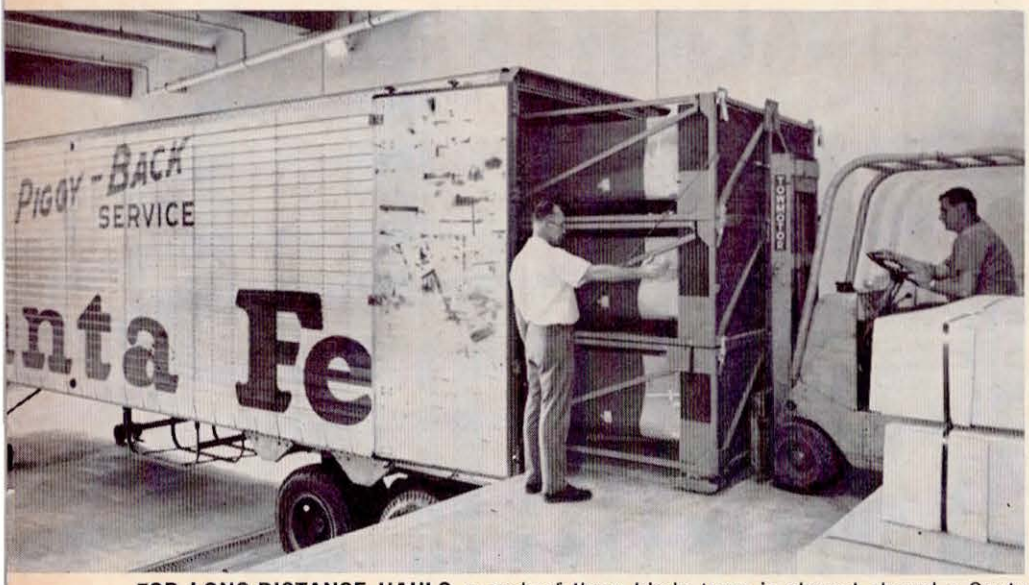
"If the carriers reduce orders the way it looks as though they're doing, it will result in last year's equipment gains being wiped out – and then some."



ENDS OF HELICOPTER BLADES are wrapped with a protective covering, then blades are put into specially designed trays which hold them firmly in place in transit.

Santa Fe rises to a helicopter challenge

Shipment of delicate "chopper" blades was a problem until the railroad devised a special rack to assure safe delivery.



FOR LONG-DISTANCE HAULS, a rack of three blade trays is shoved aboard a Santa Fe piggyback trailer. Racks move on rollers which fit into a track in trailer floor.

No weapon, apparently, has been so valuable as the helicopter in the fighting in Vietnam—and Santa Fe and Bell Helicopter Company are teaming up to help guarantee that there won't be any shortage of choppers.

Bell had a shipping problem, with helicopter blades. Thanks to a cooperative effort involving the aircraft manufacturer's materials-handling section and Santa Fe people, it's a problem no more. Blades now move piggyback, in specially-designed equipment to minimize damage.

• **Cautions and costs.** As Santa Fe puts it, "cross-country shipping of blades has become an important aspect of the business. Helicopter blades are carefully-balanced, finely-manufactured instruments which require protective packaging and, as volume rose, cost of packaging each blade in a fiberboard carton became prohibitive."

Bell and Santa Fe got together and came up with the design for a blade rack which fits securely on a track installed in a piggyback trailer. Racks are equipped with rollers for easy loading and unloading; they're built of 1½-in.-square steel section; and they're fitted with hogshair padding as cushioning for each blade. Three trays, each holding 12 20- or 22-foot rotor blades, are handled in each rack.

The blade traffic moves to Fort Worth, Tex., from Monrovia, Calif. Thus far, Santa Fe has equipped 10 piggyback trailers to handle this new business; Bell has constructed enough racks to keep the movement in steady operation—with a loaded rack available for immediate shipment when an empty returns.

• **Time, money saved.** Advantages of the new shipping system are showing up in measures of both time and money.

W. F. Frawley, traffic manager for Bell, points out that unloading time under previous shipping methods—over-the-road LTL or truckload, with individually-packaged blades—averaged three-and-a-half hours for a 24-blade trailerload. Now, Bell can unload a three-rack, 36-blade shipment in half-an-hour.

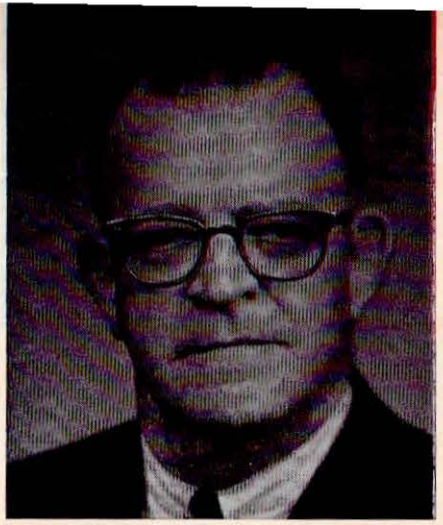
In addition, he says, Bell is receiving dollar savings through reduction in packaging costs and through new rates worked out for the movement with Santa Fe.

Perhaps the best proof of the effectiveness of the new method, however, may be in one simple fact: Bell wants to expand the operation. And in the near future, it's expected that chopper blades will also be moving piggyback from Buffalo, N.Y., to Fort Worth, via Erie Lackawanna and Santa Fe. ■

Tax credit suspension assailed by RPI

Effect on equipment buying is deplored at three-day seminar.

"A whole year of production could be lost unless remedial action is taken."
W. Ashley Gray, Jr.



"Rich railroads and poor ones are hit by the investment tax credit suspension."
P. H. Mathews

Supply industry leaders are appealing to the Administration for quick action to head off a serious decline in railroad equipment orders since the first of the year, resulting from suspension of the investment tax credit.

W. Ashley Gray, Jr., chairman of the Railway Progress Institute (and president of General Steel Industries) spelled out some sobering facts for railway suppliers present at the RPI Sales Seminar in Oshkosh, Wis., Feb. 13-15. "RPI's survey of railroad equipment orders placed October through December of '65, compared with similar orders placed in the same period of last year—after the suspension—indicates a 78% decrease in car orders and an 84% decrease in locomotive orders," said Gray. He also cited polls of the carriers made by the American Railway Car Institute and the Association of American Railroads that reinforce RPI's own glum findings about the '67 outlook for equipment orders.

The AAR survey of 43 roads that did a lion's share of equipment buying last year indicates that the companies that bought 92,000 new and rebuilt cars in '66 are planning to order only 16,300 units for the carfleet in '67. Locomotive orders, the responding roads said, will drop from '66's 1,280 units down to 166 units in '67.

Gray and other speakers at the RPI's seminar laid blame for declining order rates at the doorstep of the Administration's moves to cool off the economy in late '66.

P. H. Mathews, assistant vice president of the AAR, described the impact of the suspension as serious for both rich and poor railroads. Affluent roads (that have used up all the credit they have generated since the investment tax credit was allowed as a stimulus for capital improvements) are faced with what Mathews called "a phantom tax" because present tax liability can neither be utilized for past credit generated nor carried forward whatever investment credits are generated during the suspension—in effect penalizing them more than others. Poor roads that used the investment tax credit as leverage for lower lease rates on rolling stock are also hurt seriously by the suspension. Notes Mathews: "The Katy was negotiating for the lease of several hundred cars—but the lease fell through when it became apparent to Katy's management that the suspension's effect was to tack on $8.71 per car per month to the lease. And that's a lot of money for that many cars over a 15-year lease period."

Campaign is under way

RPI Chairman Gray said concerted action is being taken by leaders in important industry organizations to alert the Administration to the suspension's effect in the rail industry. "Early in February, representatives of the ARCI, the AAR and the RPI went to Interstate Commerce Commission Chairman Tucker, to Secretary of Transportation Boyd, to Secretary of the Treasury Fowler, to Congressional leaders and to members of the President's Council of Economic Advisors. We gave them the findings of our surveys and urged them to take another look at the situation that is being created by the suspension of the investment tax credit."

Unless remedial action is forthcoming, Gray foresees some railway supplier production lines being closed down by mid-year. "If this happens, what follows will have serious results for the railroad industry for months—and possibly years—afterward. A whole year of vital production could be lost forever. Trained workers—hard to come by in today's tight labor market—will be lost to the railroads. When the situation finally rights itself after the suspension comes off at the end of this year, suppliers will have to go out and hire and train new workers. It takes anywhere from six to nine months to get back into production after being shut down because of the long lead time needed for workers, supplies, and design problems." Gray hoped that joint AAR-RPI-ARCI action would prompt Administration reappraisal.

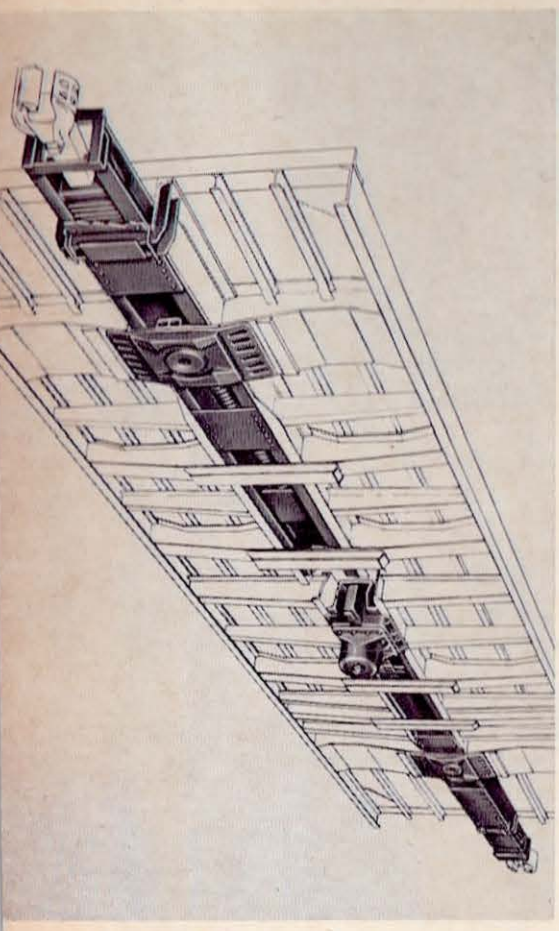
While the short-term outlook was cloudy to suppliers present at RPI's Oshkosh seminar, Gray gave members a preview of RPI's traveling slide-and-film show that reflects the supply industry's belief in a brilliant long-term outlook for both railroads and railroad suppliers.

Slated to travel around the country, the show will be presented to important meetings of railroad, business, government and opinion-leader groups. The show dramatically displays the industry's revitalized upswing during the early sixties in terms of the technology, technique and marketing changes that are transforming rail operations. Gray, acting as narrator for the show, sketched in an exciting panoramic view of rail achievements and prospects for the next decade. "It is hard for anyone to comprehend just how tremendously the railroads have developed during the last five years," he said. Efficient new services—auto rack cars, unit trains, piggyback, slab cars, covered hoppers and so forth—are making railroads the most efficient handlers in the transportation business, noted Gray. Railroads handle defense needs, pay almost $3 million in taxes per day and contribute mightily to national economic stability. "In the last eight years," said Gray, "average freight charges were reduced by about 15%."

"The combination of aggressive innovation, service and efficiency is going to be the foundation for the railroads of tomorrow—and that is the message RPI's traveling show is intended to carry to opinion-leaders everywhere across the country." ■

Era of car cushioning began 10 years ago

An open question addressed to the Stanford Research Institute by SP sparked big car changes.



BASIC DESIGN of cushoning resulting from the SP-SRI research has been little changed except for mechanical refinements, says . . .

INVENTOR William K. MacCurdy, who, at the time of the development of the device, was senior researcher at Stanford.

Significant developments in freight car design since World War II have been frequent—but none have proved more important than the development reflected by a Southern Pacific decision ten years ago.

Almost exactly ten years ago, SP placed an order for 350 box cars to its own shops at Sacramento. Simultaneously, SP placed an order for 350 cushion underframe devices, to be built to SP specifications, with Consolidated Western Steel.

SP officers, working closely with Stanford Research Institute and a former naval architect, had developed a cushioned underframe designed to absorb impact stresses and shocks. The development was destined to have far-reaching consequences for the U. S. rail carfleet.

In the ten years since SP equipped those original 350 cars with cushion underframes, the rail industry has spent more than a half-billion dollars on cushioning devices of one sort or another. There are already more than 125,000 cars so equipped—and the end is nowhere in sight. Devices aimed at cushioning equipment and ladings from shock have proliferated. More than a dozen companies have developed and marketed such impact-dampening devices. Some feature device-movement as short as six-and-a-half inches. Some devices have "travel" of 30 inches. The devices have touched off research and development of hydraulic draft gears that offer buffering of as high as 22-1/2 inches. There are about 30,000 cars in the nation's carfleet with such protection.

• **First: An SP question.** Few men regard the widening reaction to SP's move of a decade ago with more proprietary interest than a former naval architect named William K. MacCurdy, now chief engineer-cushioning devices,

DURABLE PROTOTYPE, unloading recently at

for Evans Products Co.

The patent for the device SP installed on the original order for the 350 cars is in MacCurdy's name. He was senior research engineer at Stanford Research Institute when a query from the SP came in that triggered the development work that was to have such far-reaching consequences for the industry. With a background in naval architecture and shipbuilding before joining the Stanford Research Institute in 1952, MacCurdy's specialties were mechanics and hydraulics. He had no railroad experience, yet embarked upon the research, analysis and development work that was to result in the Hydra-Cushion underframe and, in 1964, a George H. Henderson Medal from the Franklin Institute (along with SP's Manager Design Engineering William Thomford) for outstanding achievement "in the field of railway impact control and associated car design, with resulting benefits in reducing lading and rolling-stock damage."

MacCurdy recalls the original SP request as a wide-open question rather than a query for any specific solution:

International Pipe and Ceramics Corp. in Seattle, is still giving good service.

"SP approached Stanford Research and described the industry's loss and damage problem generally and asked us to examine the problem and see if we could suggest any improvements in existing practices."

● **Outline the whole problem.** "The Institute's practice is to examine a problem over-all so as to see where the real problems are, and then make a proposal outlining a specific research program—where they feel they can contribute something.

"As a starter, we made a study on the literature available plus a survey of car-handling practices. It was apparent that standard draft gears were inadequate, in view of what railroads actually did with their cars. We also discovered, of course, that cushion-underframe devices had been around for years before we were asked to look into the matter. The fact that standard draft gears are unable to handle the large shocks generated in operations had led others down the same road in time past. Short travel just makes it physically impossible to accommodate such shocks—basic physical principles tell you that."

● **No economic limits.** The original SP query in 1953 resulted in a Stanford recommendation that research and development proceed in directions involving mechanical and hydraulic solutions. "Railroad experience with leaking hydraulic devices made them skeptical," recalls MacCurdy, "but SP accepted the proposal and gave SRI a $9,000 grant for a feasibility study.

"Their concern with the maintenance and cost of hydraulic devices is what led to the vertical cylinder. We weren't specifically concerned with any economic limitations to the research—though the figure of $500 per car was thought of as an acceptable investment level. We wanted to proceed with a theoretical study that would give answers and then start working on the economic possibilities in such answers."

● **Designs, then models.** By 1954, SRI's MacCurdy, working with SP's Thomford and the SP's car department were developing a detailed design for an acceptable cushioning device incorporating multiple-leaf braking and hydraulic dampening features. A device (called Hydrafriction) was built at SP's Sacramento shops and mounted on a standard freight car and subjected to impact tests with a standard car equipped with standard draft gears.

Early in 1955, SP's then-president (now chairman), D. J. Russell announced that a full-size prototype was under construction at the road's Sacramento shops (RA, April 18, 1955, p. 15) and that the car would be placed in test service.

The car's test runs were sensational. Recalls MacCurdy, "They put the car into windshield service, hauling very sensitive lading from the Detroit area to the West Coast." Windshield shipments were little better than disasters for the loss and damage prevention men during the fifties. Results of the test were remarkable. "As I recall, there was not a claim against the loads in the test car for the first six months it was in operation."

Steps leading from analysis, research and design to development, construction and testing were supported by several additional SP grants to SRI. The Stanford Research Institute's report of July 1956, recalls MacCurdy, "noted that the second model—being called Hydra-Cushion by then—was pretty close to an optimum answer. Future production models of the Hydra-Cushion unit will be essentially unchanged, although the local structure supporting the brake plates needs to be strengthened. The underframe, sliding sill and return spring arrangement were similar to that of the first friction model, specifically designed as a cushion underframe."

● **SP flashes green light.** With two years of successful road tests completed, SP began construction of 350 box cars equipped with Hydra-Cushion underframes.

It proved to be a landmark decision in the history of railway equipment. By late 1957, SP licensed the Evans Products Co. and the Waugh Equipment Co. to manufacture and market the Hydra-Cushion device. "SP probably figures Evans' experience in loss and damage prevention equipment and Waugh's experience in the mechanical aspects of railway equipment were ideal ingredients for the project," speculates MacCurdy. Evans, Waugh and SP engineers, pooling their talents, spent a year going over the design of the Hydra-Cushion underframe so as to optimize performance and production values.

Modifications were made, but no fundamental change was made in the concept or operating principles of the device outlined by the SP-SRI projects. Springs originally placed on the outside of the hydraulic cyclinder were re-

(Continued on page 76)

1) Assuming that rising wage and material costs and/or other factors may make some form of railway rate increase eventually necessary, which would you recommend:

a) That the railways ask now for a small increase? 34

b) That action be delayed until some later time, even if that in the end means asking for a bigger increase? .. 25

2) On the same assumption, do you think any requested increase should be across-the-board, on all commodities, and affecting all shippers; or selective, leaving some shippers unaffected, but forcing others to pay proportionately higher rates?

a) Across-the-board, on all commodities 42

b) Selective, on specific commodities only 19

How shippers view an "assumed" rate boost

Some doubt necessity of one. But others would take modestly higher, "hedged" charges to offset anticipated cost increases.

A few weeks ago a prominent eastern railroad president got what may have been the surprise of his life. A number of shippers, acting on their own volition, suggested to him that the railways ask, now, for a small increase—perhaps 3%—in freight rates!

Basis for their suggestion, as the president in question related his experience to Railway Age, is that some increase will be essential, sooner or later. They think it may be required by: (a) higher railway wages, which are already known to be inevitable; (b) probable increases in material costs; and (c) such other factors as higher taxes or suspension of the investment tax credit.

With those considerations in mind, the shippers in question apparently reasoned, on the one hand, that a modest increase in charges now might be less burdensome to shippers than a later, larger boost; that it would be immediately helpful to the railways; and that, being small, it might be easy to obtain.

On the other hand, they appeared to feel that a more substantial increase at some later date would arouse more opposition; be harder to get; be a heavier burden in the end on shippers, and come too late to be of great help to the carriers.

That is the background for the Traffic Poll here reported.

● **Is increase necessary?** As the Poll shows, a small but definite majority of respondents (assuming the need of any increase) favor a small one now, in preference to a larger boost later.

A substantially bigger majority thinks any increase should be across-the-board, rather than selective.

But many shippers seriously question the need of any increase—at least until the effect of higher railway costs is not only known but provable.

This doubt crops up in the reply of a New Yorker: "I was under the impression that the railroads, with TOFC doing so well, were in great financial shape." A far westerner echoes the doubt: "Financial reports of the majority of Class I railroads show a healthy picture for 1966. I feel no rate increase would be warranted this year." And a southerner, repeating that last statement, says the need for an increase "must be proved."

● **Small increase now.** On the assumption stated in the Poll, however —that some rate increase is or may soon be necessary —there is a definite if narrow preference for a small boost now.

"If motor carriers can increase their rates almost every year," says a midwesterner, "I certainly cannot object to a small, reasonable rail rate increase once in several years."

A shipper from a neighboring state thinks "an increase not to exceed 3% on commodities in general would not have too much opposition from anyone who is conversant with present wage and cost-of-living increases." From the same general area come such opinions as that "small increases are easier to absorb and create less controversy," and that "an increase of 2 to 3 cents per 100 lb now would be most helpful to the rail industry, and would not disrupt marketing policies within industry."

● **Wait.** As in so many prior Polls, the minority of respondents who prefer to see rate action delayed are rather more vocal than the majority.

Their basic argument is pretty well summed up by a northwesterner who asks: "Why not wait until railways know what the increased costs will be, and then request an increase regardless of amount?"

"When the extent of the definite cost increase is determined, a commensurate rate increase could be more readily recognized and acceptable," says an eastern traffic man.

A southerner concurs in feeling that it would be unwise "to ask for a small increase and then if that isn't sufficient after labor contracts are negotiated to ask for another one." Along that same line, a New Englander suggests that "an increase now in freight rates would be leverage for unions to increase their demands. Delay in action would allow time to see what wage increases are granted."

Another reason for delay is advanced by a midwesterner, who writes that, "if the Vietnam war does not end within a year, we might as well face the fact that a small increase now would not be the answer."

● **What kind of increase?** Assuming, again, that some rate increase is or may be necessary, opinion as to its nature—across-the-board or selective—is far less evenly divided than on its timing.

On the "across-the-board" side, a Pennsylvanian who would accept an immediate increase points out that "increases in railway operating costs apply against all commodities. Thus, it

(Continued on page 41)

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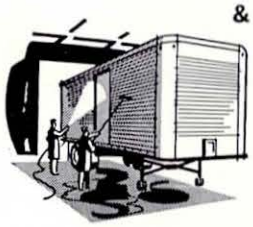

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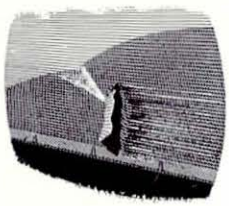

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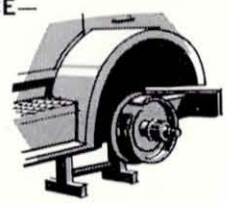

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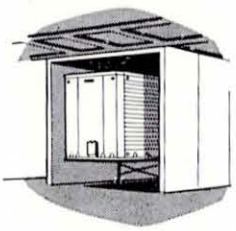


Circle 23 on reader service card

Shippers view rate problems

(Continued from page 36)

would be wrong to be selective in applying increases."

But an Ohioan who favors delay "until costs are apparent," also thinks an increase (if one comes) should be general. "Any increase in rates required because of increases in the general level of costs should be borne equally," he writes.

Other shippers believe, however, that "any increases must be selective." Collectively, they cite several reasons for their feeling. One is to "avoid marching up the hill and down again," as in the wake of past general increases. Another is because "certain commodities may require different transportation services, and the cost of those may vary as a result of increased wage or material costs." A third is the obvious fact that some freight is particularly subject to, or free of, competition.

And an equally obvious fourth is that increases on some commodities might be self-defeating, by leading to loss of both traffic and revenue. This is emphasized especially by shippers of grain, of perishable agricultural goods and of forest products. A west coast lumberman points out, for example, that curtailment of home building and construction because of "tight money" has cut lumber and plywood production by 20%. "To raise rates now would probably result in fewer shipments and less total revenue for carriers."

● **Angles to consider.** He and other respondents suggest that "a better approach would be in the direction of incentive rates—lower rates for heavier shipments, which would result in better utilization of equipment and more competitive charges."

Other respondents clearly feel that rate increases might be avoided if rail service and operating efficiency were improved. "Rail carriers," says one, "have not reached full plant utilization. A general increase would at least retard and perhaps completely negate such utilization and its accompanying economies."

There is, finally, a strong feeling that railroads should stop asking for "petty" increases. Typical of that feeling is the answer of a southerner who approves an immediate small general increase, but only with "the sincere hope that it will deter the carriers from fringe attacks on accessorial charges and service performances, such as the ludicrous attempt to charge $25 for release of an unclean car." ■

WATCHING **WASHINGTON** WITH WALTER TAFT

TAFT

BOYD WANTS DIVERSIFICATION TALK—The disposition of Secretary of Transportation Alan S. Boyd to talk about common ownership of for-hire carriers in different modes of transportation gives the railroads a chance to reactivate their selling drive for this major proposal of their legislative program. The controversial proposal, opposed by railroad competitors, has been dormant for several years, but it has never been dropped from the industry's list of "principal legislative objectives." It appears there as a call for "removal of obstacles to transport diversification."

Railroad operation of water carriers is now virtually prohibited by the Interstate Commerce Act. As to operation of motor carriers, the Act prescribes a special showing which the ICC interprets as a requirement that highway operations of a railroad must be confined generally to those which are auxiliary to rail operations. And the Civil Aeronautics Board interprets the Federal Aviation Act in a way which bars railroads from operation of air lines.

NOT FORBIDDEN TERRITORY—Boyd's disposition to talk about the problem was revealed by him in a recent Chicago speech before the Transportation Association of America. After expressing his feeling that much can be done to improve "integrative and consolidating measures at the so-called transfer points," Boyd went on to say: "The inhibiting factors which lower intermodal efficiency are not exclusively technological. They are often institutional. For example, there would have to be some statutory changes before the full coordination arising from common ownership of several modes would be possible."

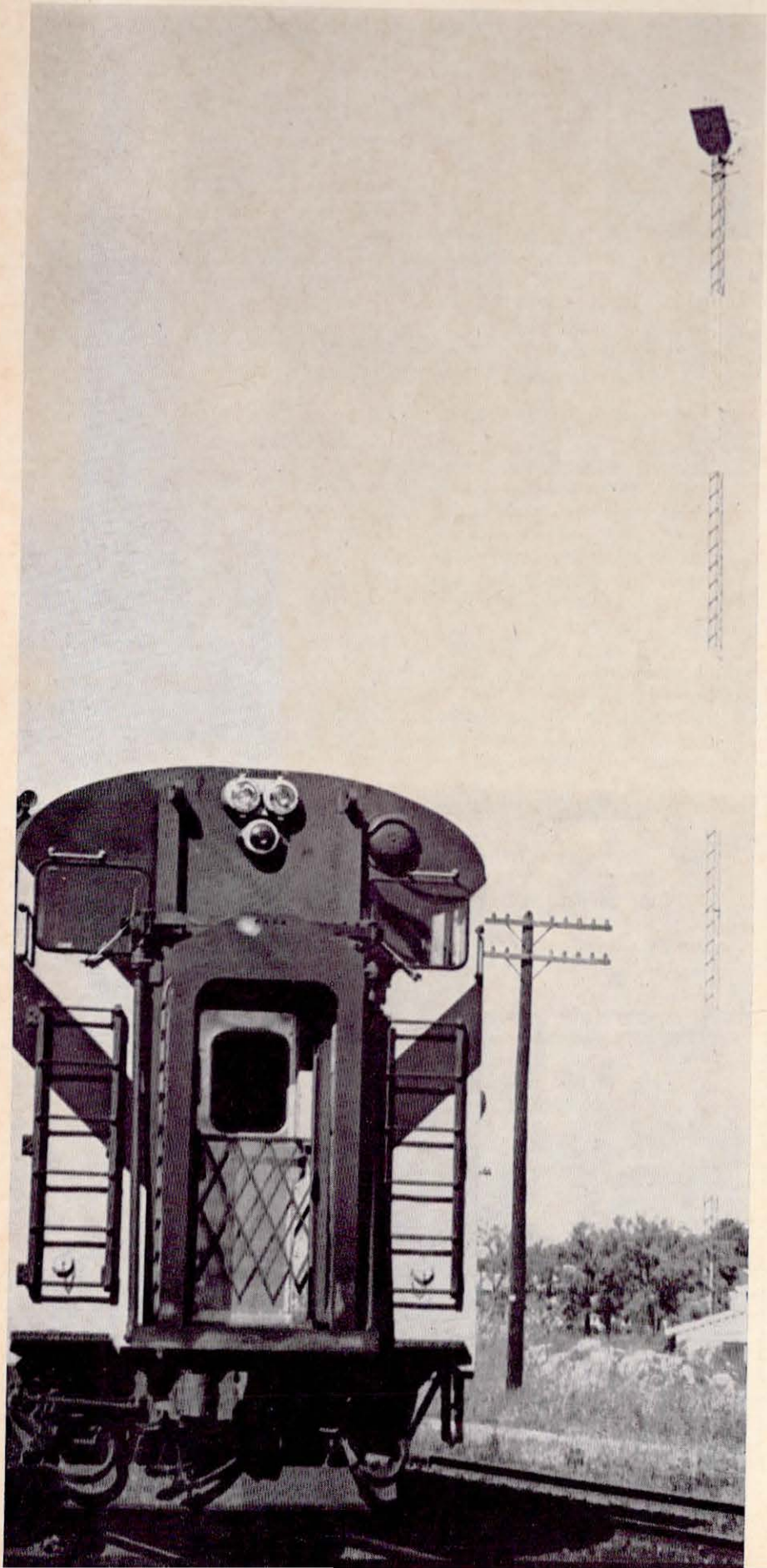
Then came the Secretary's assertion that he does not regard this "as a territory forbidden to contemplation." After making this statement, Boyd explained that he does not want to be considered an advocate of common ownership at this time. However, he does think "it's something that should be talked about—something that too many people in transportation have refused even to discuss."

FROM REA'S TAYLOR—President William J. Taylor of REA Express is also talking about common ownership. The present restrictions were "probably the result of surface analyses rather than in-depth thinking," he suggests, adding: "But if anybody thinks there is still any danger of one mode swallowing up another in our present economy, I think he is sadly mistaken. I submit that the present defense of this segregation of ownership is based more on selfish interest in preserving the status quo than upon encouraging the orderly development of our transportation network."

TIMELY SURVEY—All of this makes quite timely a comprehensive survey of the common-ownership issue which was made recently by Byron Nupp. Nupp is assistant director, Office of Transportation Policy, Office of the Undersecretary of Commerce for Transportation (formerly headed by Boyd and now awaiting transfer to DOT). The review was published in the November-December, 1966, issue of the ICC Practitioners' Journal with a disclaimer saying the opinions expressed by Nupp are not necessarily those of the Department of Commerce.

Nupp finds generally that the present restrictions reflect "historic circumstances which may no longer be valid." He suggests the possibility of a new policy under which regulatory agencies would be permitted to authorize all kinds of common ownership—provided it would not unduly restrict competition or be used to thwart development of one of the modes, and provided also that a proposed common-ownership arrangement would bring public benefits over and above those available from the individual carriers involved and result in an "integrated physical and financial operation," minimizing "subsidization of one mode by another."

Microwave helps C&NW keep its



Three years after the first installation of microwave on the Chicago & North Western, road officers say they're glad they decided to expand its use on the system.

"Microwave communications is the key," say Chicago & North Western officers when describing the dispatching function involving their Milwaukee and Wisconsin divisions. These lines running north and northwest from Chicago handle heavy commuter traffic and considerable local and regularly scheduled freight trains. The dispatchers are in Milwaukee, about 100 miles north of Chicago.

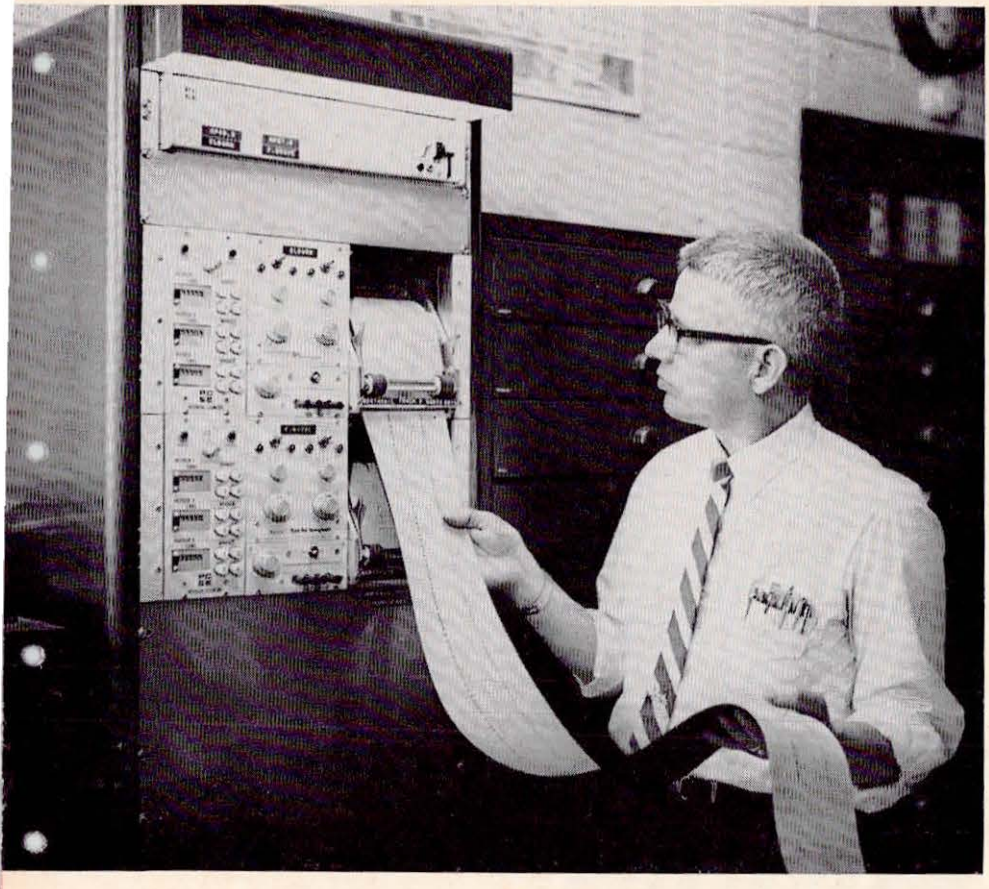
• **Communications to coordinate.** To handle the commuter traffic on a nearly perfect on-time basis, and still keep freight trains on schedule requires alert dispatchers being able to communicate promptly at all times. Microwave answered the need for a reliable weatherproof, long-distance communications facility.

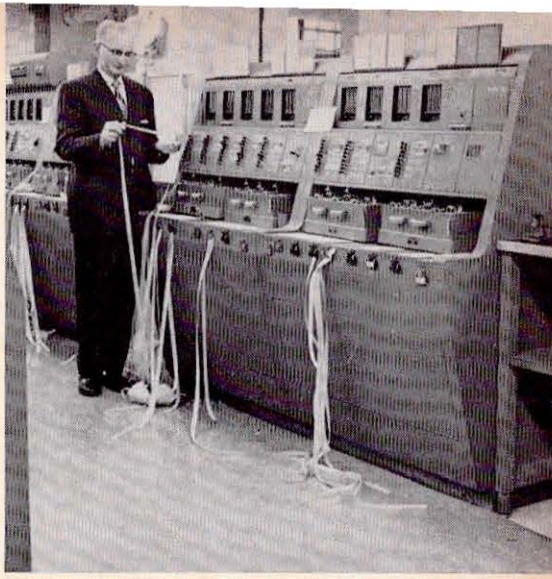
Now after a little more than a year's operation of the completed Chicago-Milwaukee microwave link, results have more than justified the decision to go to microwave. Comments C&NW Communications Engineer T. M. Evans, "We are 'sold' on its advantages for positive dispatcher control. To dispatch efficiently, we must have reliable and instantaneous communications, and microwave provides us with both essentials."

With voice communications over the microwave network, the dispatchers in Milwaukee are able to "fold in" freight train traffic to coincide with the heavy volume of commuter traffic in the morning and evening. They know instantly when and where the problem areas are, and they have the means with microwave to correct any bad situation that should occur.

• **First microwave in '63.** C&NW's first microwave system was operational by 1963, and extended from Chicago headquarters west to the Proviso, Ill., classification yard and on to West Chicago, Ill. This 29-mile link also connected to a 26-mile link extending north from W. Chicago to Crystal Lake. This microwave system was furnished and installed by Motorola Communications & Electronics Inc.

trains on schedule





RELAY OFFICE in Chicago is where it all comes together. Administrative and operational messages come in from Milwaukee and other key office on the Chicago-Milwaukee route via microwave.

Chicago keeps tabs on what goes on

HOTBOX CHECK is performed by microwave. Data from hotbox detectors proceeds to the Chicago office for graphic printout and interpretation.

Two years later, microwave was extended from Crystal Lake to Milwaukee, about 63 miles. This equipment, furnished by Radio Corp. of America, is their type CW-60, which is totally solid-state (no vacuum tubes).

This latest microwave system has an initial capacity of 24 voice channels for dispatcher service and C&NW's own private dial telephone system. Also, the microwave system handles teletypewriter communications for administrative and operational messages.

• **Hotbox data, too.** By the end of this year, the microwave system (118 miles, Chicago to Milwaukee) will be handling hotbox detector data its entire length, as more detectors are being installed. Hotbox-detector indication data are telemetered to the road's Chicago headquarters where it is recorded in graphic form on chart paper. Alarm circuitry and logic is included in the hotbox detector system. If an overheated journal is detected, an alarm bell sounds at the readout recording room. Wheel counter information is sent to this room which pinpoints the car in trouble. The train dispatcher is immediately notified. He alerts the train crew via radio.

In such an instance as described, microwave handled the hotbox detector data to Chicago. Also, it handled the voice communication to the dispatcher, and his voice to a wayside radio base station for calling to the train crew.

• **Dual units for reliability.** In this latest microwave link (Crystal Lake-Milwaukee), there are two repeater and two terminal stations. Each has the RCT type CW-60 equipment with primary and hot standby radio frequency units. If there is an outage or failure in the primary unit, communications is immediately switched over to the hot standby (always turned on) unit.

The CW-60 microwave equipment operates directly from Riavolt battery with a battery charger. An emergency engine-generator is installed at each microwave station to keep the battery at full charge should the commercial power fail.

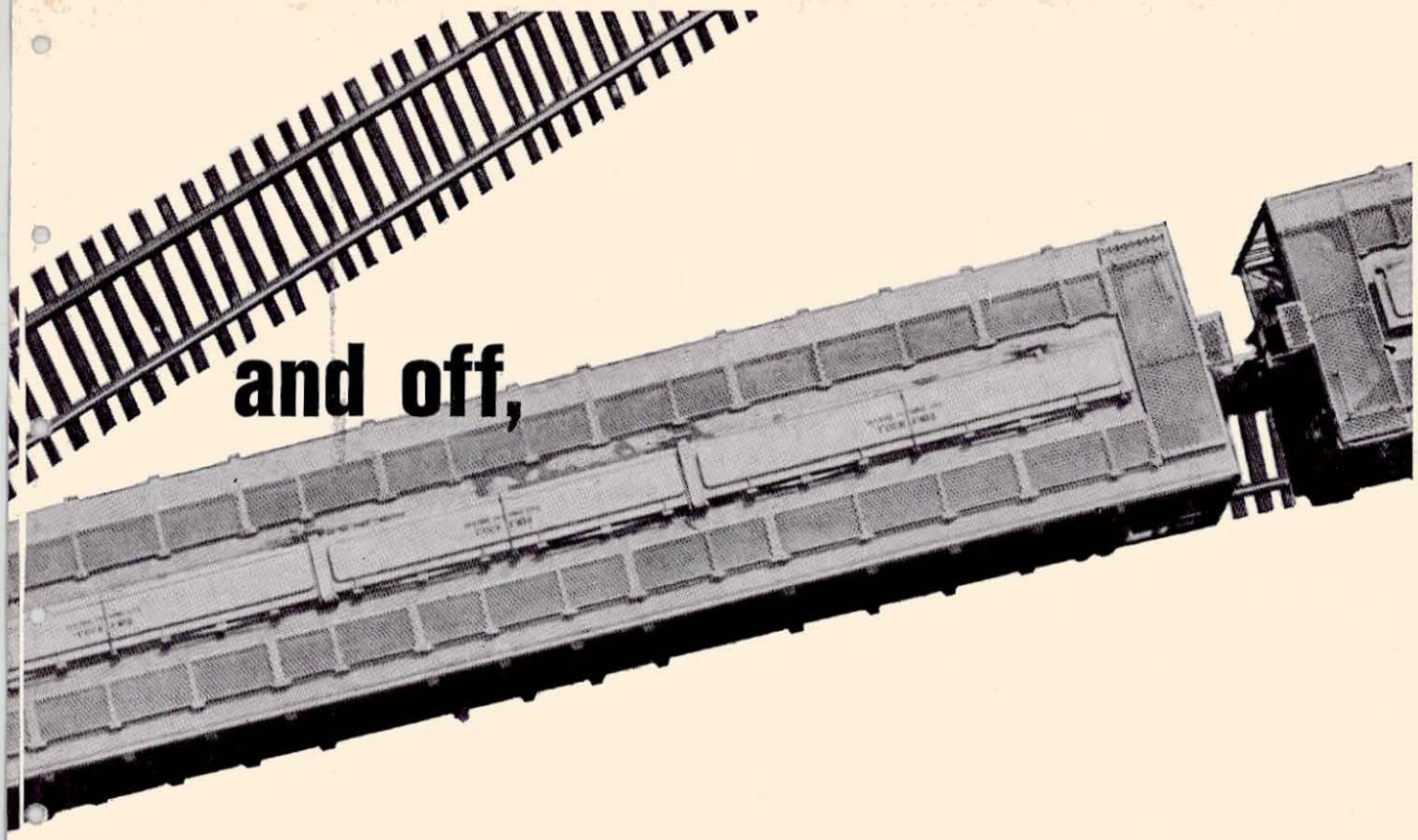
To aid in trouble shooting, preventive maintenance and to monitor operations, a fault alarm system "watches over" the microwave system. The alarm system provides communications officers and microwave maintenance men with up-to-the-second check on the status of every microwave station in the network. The system reports on 16 functions and provides a visual display of each station's operational status. Continuous monitoring of various electronic gear is maintained by the alarm system including such units as transmitter, receiver, multiplex (channelizing equipment).

The fault alarm also checks to ascertain if tower lights are not lighted or if unauthorized entry has occurred. If the ac power fails, this alarms. When C fails, the alarm system determines if the emergency generator has been started, and also notes the condition of battery charging.

• **Improved service.** Better communications has resulted in better service, not only for commuters but for shippers, observe C&NW officers.

"Microwave is one more way that we have upgraded our equipment and service," Evans reports. "We have found that microwave is an extremely reliable communications medium. And it has to be, especially in the peak rush hours when we depend on it to serve as a control medium for the greatest percentage of our commuter volume. We just couldn't run our service as efficiently without it." ■

On your tracks...



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Extra payload capacity, higher per diem rates make cars made with Reynolds Aluminum the lowest-cost, most profitable cars to own.

Every time you load it, an aluminum-body covered hopper car could be carrying 13,500-16,000 lbs. more payload than a steel car the same size.

And when you figure the extra revenue this added payload earns over its lifetime, the car made with Reynolds Aluminum is a really sound investment. But there's another fact to keep in mind:

The extra earnings don't stop when the car leaves your tracks. Aluminum cars command higher per diem rates for off-line service, so their higher revenue-production is not limited to "captive" service.

The table at right shows exactly how much this higher per diem rate can mean in earning power over a car's first 15 years of service—and remember, this is just *one* of the profit-building advantages the aluminum car offers.

Cars with bodies of Reynolds Aluminum have proven more economical to operate and maintain than steel cars. Their lighter weight reduces round-trip ton-mileage, which in turn means lower operating costs.

Aluminum cars never need protective painting or lining. So, if you had to line a steel car three times during its lifetime, at a cost of about $700 per lining, the aluminum hopper would save $2100 in linings alone. And you can add to that the savings in revenue which would be lost while the steel car is being serviced.

Added Per Diem Revenue with Aluminum Cars

Year	Aluminum Car Value For Per Diem Per Unit (1)	Per Diem Rate	Steel Car Value For Per Diem Per Unit (1)	Per Diem Rate	Differential Per Diem Rate	Added Revenue For Aluminum Cars Per Unit Per Year (2)
1	$19,000	$6.15	$15,000	$6.15	—	—
2	18,430	6.15	14,550	4.50	$1.65	$ 297.00
3	17,860	6.15	14,100	4.50	1.65	297.00
4	17,290	6.15	13,650	4.50	1.65	297.00
5	16,720	6.15	13,200	4.50	1.65	297.00
6	16,150	6.15	12,750	4.50	1.65	297.00
7	15,580	6.15	12,300	4.50	1.65	297.00
8	15,010	6.15	11,850	4.50	1.65	297.00
9	14,440	4.50	11,400	4.50	—	—
10	13,870	4.50	10,950	4.50	—	—
11	13,300	4.50	10,500	4.50	—	—
12	12,730	4.50	10,050	4.50	—	—
13	12,160	4.50	9,600	3.58	0.92	165.60
14	11,590	4.50	9,150	3.58	0.92	165.60
15	11,020	4.50	8,700	3.58	0.92	165.60
Total						$2,575.80
Average		$5.380		$4.426	$0.954	$ 171.72

(1) Straight line depreciation at 3% per year
(2) Assumed 180 off-line days per year

Before you invest in new hopper or gondola cars, look into the economics of aluminum-body cars. Contact your local Reynolds office for the complete story, or write *Reynolds Metals Company, P. O. Box 2346-TM, Richmond, Virginia 23218.*

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MONEY TALK

BY JOHN MITROS

To buy or not to buy, that is the question

Oracles are nice to have around. Industry problems stemming from the suspension of the investment tax credit would be easier to analyze.

And wishing for a handy oracle, puts me in mind of a trip that Fred Miles (our managing editor) and I took about a year and a half ago. We were in Munich for the International Transportation Exposition and decided to go on to Delphi in Greece. There, for a thousand years, the fine art of forecasting originated and flourished until the influence of the Pythoness (the oracle) waned. Of course men still searched for certainty for the future. The search was conducted by superstition, hunch, scratch pad and horse sense. Only in the last ten years has man reacquired faith in instant answers —from computers.

Shrieking prophecies

Delphi is a slope of temple sites, cupped in the mountains just close enough to the Corinthian Gulf for the blue water to be visible through a haze of heat rising from the region's terraces of vineyards and olive groves. Fred and I stood in the Temple of Apollo on the very spot where young girls once shrieked prophecies that effected ancient empires.

Of course, oracles and computers really depend upon what's put into them. The Pythoness at Delphi, in fact, was known to lean heavily on a core of priests with intimate knowledge of the political scene in the ancient world. Their insights were gleaned from a highly organized network of priestly informants and spies.

Puzzling over the railroad reaction to the suspension of the investment tax credit, one could wish the Pythoness was still in business. Then one could ask her what she thinks is ahead, now that Administration measures to cool the economy via suspension seem to have reduced rail capital programs to a trickle. One can imagine the pre-prophecy discussion going on in the temple conference room:

The Pythoness, a young girl, reads the written question to the three priests sitting around the table (a priest of transport, a priest of economics and a priest of government).

"What will I tell this guy?" she asks the priests.

"Shut up" snarls the transport priest. "When we settle this, we'll tell you what you think." Turning to the priest in charge of government, he says, "The suspension of the investment tax credit is hurting the railroads more than other industry because it is unconscionably aggravating already existing capital deficiencies. Rail managers can hardly be blamed for holding off when the Administration structures a situation where they can save millions of dollars on purchases by just waiting ten months."

How much is involved?

The politician priest shakes his head. "If the ten-month bit was a cinch, perhaps. But nothing is less certain than a government's willingness to give up cash coming in. That 6% surtax they're talking about is a lot likelier to come than suspension of the suspension.

"Besides, just how much money is the suspension really costing the industry? I don't mean the $28 million per $100 million stuff that editor out in the temple keeps mumbling about—I mean how much are they really hurt?" Both priests turn to the economist priest.

"I don't know. The credit they generated last year was $106 million—on their capital programs. The rub is, they don't earn enough to collect it from the treasury. The maximum they could have collected was 25% of their federal income tax liability—about $56 million. Of course, some benefited from low leasing rates. Also, some of the top money-making roads are doubly hurt because they have no credit-carry-forward, and thus cannot use any of this year's 25% of tax liabilities."

He is interrupted by the transport priest. "For Cheops sakes, get to the point. How much will they save if they snap the order book shut and wait until next year to buy?"

The economist replies, "I don't know that either. For example, right off the top, they will have to pay—assuming a year's delay in equipment production —the costs involved in suppliers' shutting down and starting up productive facilities. No one knows how much that is, but it's substantial. More easily estimated is the erosion of their capital. Authorities tag current inflation at 3.4%. That means a $66 million loss on a program the size of the one they had last year. Then there is the matter of what the equipment would have earned for a year if it had been ordered. It would have earned about $68.5 million at a little better than 4%, all other things being equal."

He looks at the transport priest. "And then there is the matter of what the equipment would have meant in realized opportunity instead of lost customers."

The transport priest shakes his head. "How can we put a dollar sign on that?"

The government priest interrupts. "*You* can't, but it's probably as large a factor as either the financial erosion or the effect of lost earnings. But, even if you ignore that, plus the cost of suppliers' plants being shut down and started up, the industry still could get clipped $135 million from money erosion and lost business—all because the government took away a credit that at the most could have saved them $56 million."

The problem affects all

The transport priest sighs. "No, I'm not forgetting. It is just that you can't get around the fact that for both prosperous roads—which have bought heavily and thus stand to be doubly penalized for buying this year—and poor roads, that cashed in on the credits via low lease costs, the problem is pretty particular, despite the industry effect over-all. If a road can save $28 million by buying $100 million in equipment, 10 months from now, they'll do just that. A poor road may be able to afford a 3% lease—but not a 6.5% lease."

The Pythoness interrupts, "You guys make up your minds. That guy is sitting out front with pencil poised. What'll I tell him?"

The senior priest present (the government man) smiles: "Tell him the railroads are right but the industry is wrong."

She smiles in admiration. "By Cheops, that's as good as that bit you gave old Croesus when he came in wanting to know what would happen if he went to war with Persia. You guys told him his move would destroy a great empire—he couldn't fault us when he failed to guess it was his own empire that would be destroyed."

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Thus began one of the most significant commercial odysseys of our time. Along the way, the train encountered winter-whipped snow and high winds — yet the shipment arrived safe and sound in Minneapolis a few days later, with all packaged lumber intact.

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Great Northern car #160501 was one of many cars equipped with FreightMasters in the train that provided damage-free movement of the lumber. Even across the slopes of the Rockies, where trains are subjected to continuous draft and buff action, the FreightMaster units demonstrated graphically the high-capacity cushioning capabilities that have made them famous.

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Carle S. Johnson
C&O-B&O

E. B. Hardwig
JT

John J. Dan
NYC

John E. Chubb
PRR

PEOPLE IN THE NEWS

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—Carle S. Johnson, operations analyst officer, Baltimore, appointed superintendent car utilization there (RA, Feb. 20, p. 31). He will be responsible for developing and implementing new techniques for getting maximum use from C&O-B&O freight equipment.

DETROIT, TOLEDO & IRONTON.—Charles L. Towle, director of industrial engineering, **Pennsylvania,** Philadelphia, named president of the DT&I, wholly-owned subsidiary of the PRR, at Dearborn, Mich. Mr. Towle succeeds **John E. Chubb,** who returns to the PRR as vice president at Baltimore. From 1962 to 1965, Mr. Towle was vice president—operations, DT&I and early in the latter year he assumed the same position with the **Ann Arbor,** returning to the PRR as director of industrial engineering in July 1965.

ILLINOIS TERMINAL.—E. L. McKenzie, general freight agent, St. Louis, Mo., appointed assistant freight traffic manager there, succeeding **G. D. Wertz,** who retires March 1, after more than 41 years with the IT. **Victor L. Stamps** appointed assistant general freight agent, St. Louis, succeeding **K. W. Ross,** who replaces Mr. McKenzie.

JACKSONVILLE TERMINAL.—E. B. Hardwig resigned Feb. 15 as manager of operations, **Alton & Southern,** East St. Louis, Ill., to accept the position of president and general manager, Jacksonville Terminal at Jacksonville, Fla. Mr. Hardwig began his career in 1937 in the engineering department, A&S. During 1950-1951 he was resident engineer in charge of construction, **Rockdale, Sandow & Southern,** at Rockdale, Tex. Mr. Hardwig was named superintendent of operations, A&S in 1954 and became manager of operations in 1965.

MAINE CENTRAL.—Robert L. Baker promoted from sergeant to lieutenant of police, Portland, Me. Lt. Baker assumes the duties of **Albert E. Christie,** chief special agent, who retired Jan. 30 after 44 years of railroad service.

MILWAUKEE.—Wallace M. Van Buren, passenger sales representative, Chicago, named assistant district manager-passenger sales there, to succeed **Leo W. Kelly,** retired.

MONON.—J. R. McCarthy, Southern sales manager, Atlanta, Ga., promoted to assistant vice president—traffic and marketing, Chicago. **O. W. Eisemon,** assistant general manager, coal sales, Chicago, promoted to general manager coal sales there. **W. T. Flinn,** Western sales manager, Chicago, named regional sales manager there. **M. G. Pruett** appointed regional sales manager, Chicago. **H. L. Hoffman,** Eastern sales manager, New York, promoted to assistant vice president—traffic and marketing there. **H. E. Harlan** appointed district sales manager, Indianapolis, Ind.

NATIONAL RAILROAD PIGGYBACK ASSN.—P. Laurin Cowling, assistant to the president, **Milwaukee,** elected president of the association. **C. T. Groton, Jr.,** general manager, merchandise operation, **Missouri Pacific,** elected vice president.

NEW YORK CENTRAL.—John J. Dan, Pacific Coast freight sales manager, San Francisco, Calif., appointed assistant vice president—freight sales and service, Cleveland, Ohio.

J. Robert Clark, division superintendent, Western Division, Chicago, transferred to the Toledo Division at Toledo, Ohio, succeeding **Robert T. Fortin,** transferred to the Northern District.

Theodore E. Jordan, division engineer, Buffalo, N.Y., has been appointed division superintendent, River Division, Weehawken, N.J., succeeding **James T. Sullivan,** named district engineer, New York District.

John R. Roy, trainmaster, Utica, N.Y., transferred to the Lake Division, Youngstown, Ohio, succeeding **Howard D. Lent,** appointed suburban planning engineer, with responsibility for initiating and implementing projects to improve suburban train service on the Hudson and Harlem divisions.

Jay M. Gilmore, division superintendent, Detroit, Mich., appointed engineer of construction, New York.

William J. Grabske appointed supervisor—production planning and control, New York.

NORFOLK & WESTERN.—J. E. Savely, manager industrial development, Central Region, Cleveland, named director of industrial development, St. Louis, a new position. **John B. Anderson,** industrial engineer, Roanoke, appointed manager industrial development, St. Louis. **Romauld B. Michels,** industrial agent, St. Louis, named manager of the new Detroit industrial development office. **Thomas D. Gillett,** industrial agent, Central Region, Cleveland, promoted to manager there, succeeding Mr. Savely.

Jack V. Morrow, traffic representative, Toledo, Ohio, appointed market analyst, Roanoke. **W. F. Zackmann** also named market analyst, Roanoke.

(Continued on page 53)

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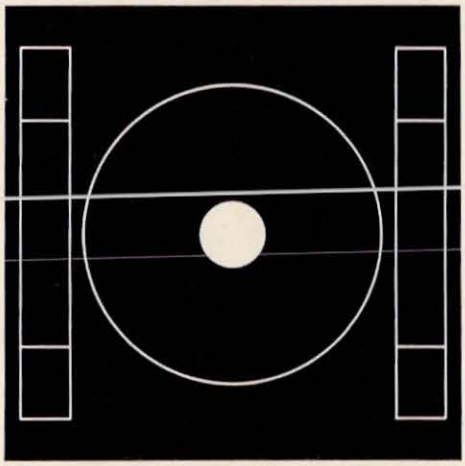

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THE U30 FROM GENERAL ELECTRIC

General Electric introduced the modern concept of railroading with the U25, the first high horsepower locomotive to offer high-speed-and-tonnage capabilities with reduced running schedules. The U28 further refined these concepts and provided motive power that has achieved new standards of operating efficiency and reliability.

The next step in advancing motive power progress from General Electric is the U30 . . . with proved systems and components for the new era in American railroading.

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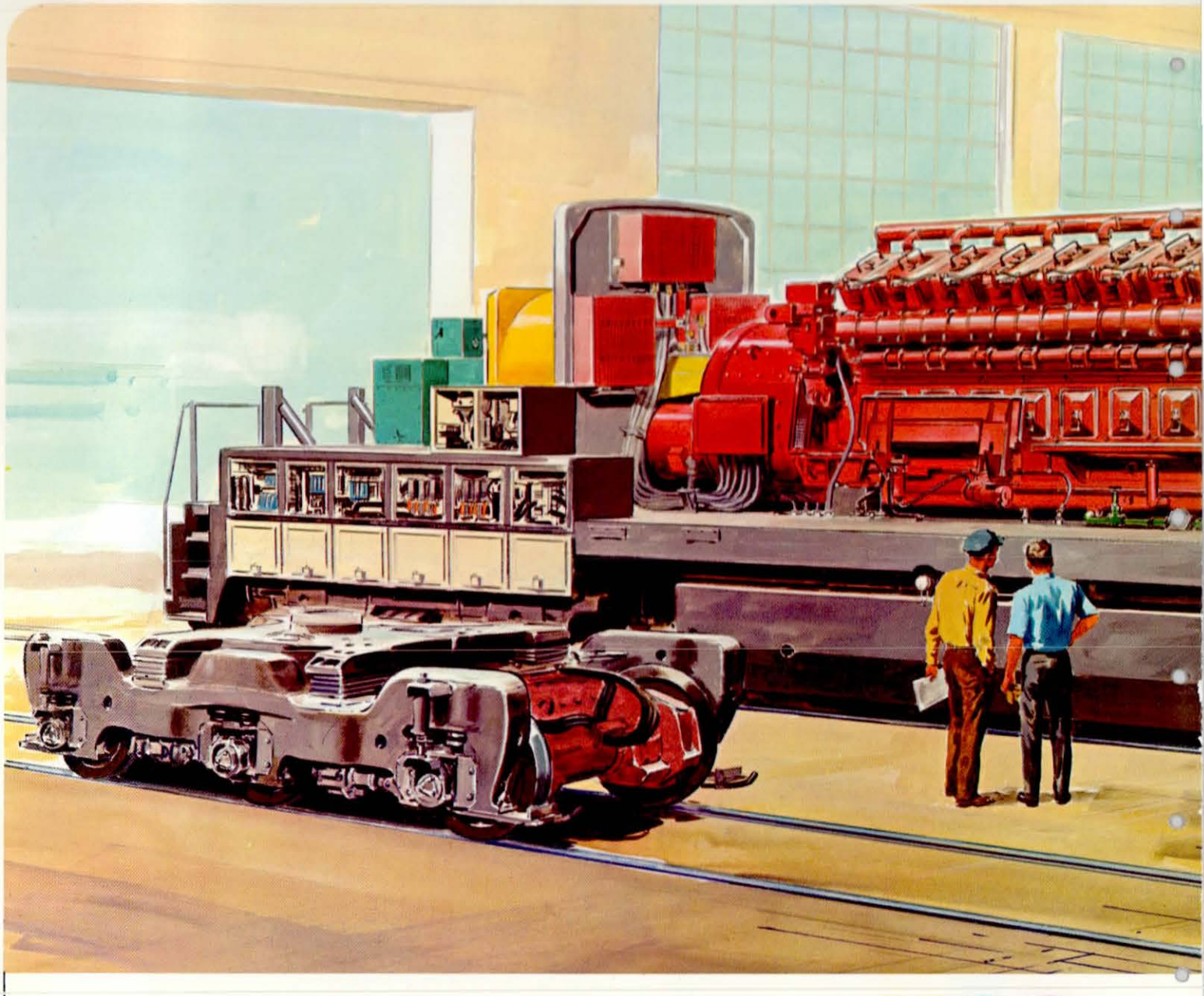

Under The U30's

The U30 is designed to meet the needs of modern high speed railroading with features that have been proven in millions of service miles.

RELIABILITY

Components of the U30 have been refined to further assure maximum reliability of operation. The FDL engine, with over 200 million miles of service experience, contains significant improvements that enable it to establish improved performance records for reliability and low cost operation . . . 3,000 HP output with low fuel consumption and operating temperatures consistent with long component life. The electrical system, utilizing a new high performance alternator and solid state circuitry, and GE752 motors are designed to optimize the performance of the transmission system with high reliability and low maintenance.

SIMPLICITY

The U30's simplicity and rugged construction are evident throughout. The equipment air systems, using a

Hood . . . A New Look at Locomotive Superiority

single gear driven equipment blower and inertial filters provide clean pressurized air to the rotating equipment, rectifiers, control compartment, and operator's cab. Super-cleaned air is supplied to the diesel engine by utilizing inertial and oil bath filters. These simplified air systems eliminate individual blowers, motors, wiring, and controls used in conventionally designed air systems.

MAINTAINABILITY

The U30's straight forward design simplifies periodic maintenance and reduces shop time. Major wiring and piping is located on opposite sides of the platform. Conservatively rated components make the U30's systems uncluttered and easily understood, and therefore more maintainable.

ACCESSIBILITY

U30's components are located for ease of accessibility. The U30's main propulsion and air brake control devices are protected in pressurized compartments readily accessible from the outside. Large doors provide easy access to the diesel engine, alternator and auxiliary equipment. Easy access to the U30's systems reduces down time and increases availability.

AVAILABILITY

The U30's reliability, simplicity, and ease of maintenance add up to improved locomotive availability which results in a faster return on investment! Find out more about this outstanding locomotive and the contribution it can make to your railroad. Contact your GE Transportation Sales Engineer, or write General Electric Company, Transportation Systems Division, 2901 East Lake Road, Erie, Pennsylvania 16501.

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U30 motive power for modern railroading

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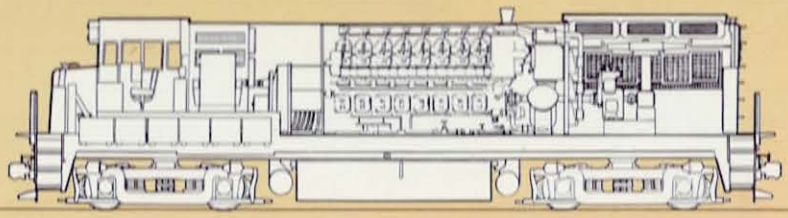
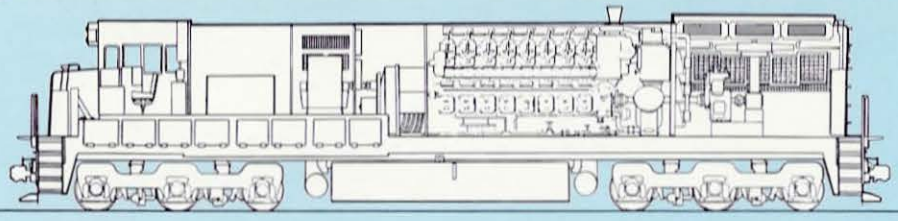


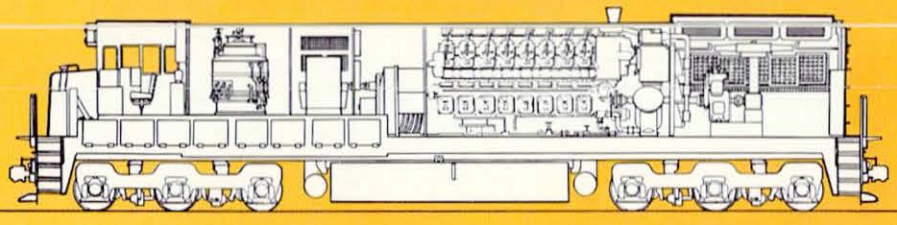
U30B

Horsepower—Continuous for traction	3000 HP
Maximum Speed—Standard	75 MPH
Weight	252,000 lb to 288,000 lb
Length over Couplers	60'2"
Fuel Capacity	3250 gal
Equipment:	
Engine—1	FDL16D
Generator—1	GTA9
Motors—4	GE752E6



U30C

Horsepower—Continuous for traction	3000 HP
Maximum Speed—Standard	70 MPH
Weight	360,000 lb to 420,000 lb
Length over Couplers	67'3"
Fuel Capacity	4000 gal
Equipment:	
Engine—1	FDL16D
Generator—1	GTA9
Motors—6	GE752E6



U30CG

Horsepower—Continuous for Traction	3000 HP
Maximum Speed—Standard	93 MPH
Weight	360,000 lb to 420,000 lb
Length over Couplers	67'3"
Total Fuel and Boiler Water Capacity	4000 gal
Equipment:	
Engine—1	FDL16D
Generator—1	GTA9
Motors—6	GE752E6

TRANSPORTATION SYSTEMS DIVISION

GENERAL ELECTRIC

ERIE, PENNSYLVANIA

(Continued from page 48)

Appointments at Cincinnati, Ohio: **F. M. Helms,** sales manager; **T. E. Cutter** and **C. E. Walbrun,** District sales managers; and **D. C. Pate,** traffic manager. Mr. Pate will have jurisdiction over agencies at Cincinnati and Portsmouth, Ohio; Charleston, W. Va., and Louisville, Ky.

Earl C. Perkins appointed to the newly created position of traffic manager, Buffalo, N.Y. Abolished position of assistant traffic manager, Buffalo. **Milton N. Beckley** named assistant freight traffic manager—rates, Roanoke. **H. G. Johnson** appointed district sales manager, Philadelphia. **O. D. S. Getzfread,** assistant traffic manager, Boston, retired Jan. 31 after more than 40 years' service.

W. T. Thomas, freight traffic manager-rates, St. Louis, appointed general freight traffic manager-rates there. **A. D. Thorp** named assistant general traffic manager-sales, St. Louis.

NORTHERN PACIFIC.—The title of **W. K. Smallridge,** director of purchases, St. Paul, Minn., has been changed to director of purchases and stores, effective Jan. 16. The general storekeeper will report to Mr. Smallridge, who reports to the company president, as before. **N. M. Doerr,** assistant district storekeeper, Brainerd, Minn., promoted to assistant purchasing agent, St. Paul.

PENNSYLVANIA.—John E. Chubb, president, **Detroit, Toledo & Ironton** at Dearborn, Mich., since 1963, appointed vice president, PRR, Baltimore, Md., and has been succeeded by **Charles L. Towle,** director of industrial engineering, PRR. In the newly established position Mr. Chubb will provide liaison between the railroad and local and state governmental bodies, and will have executive sales responsibilities.

Harold S. Jensen has joined the PRR as director of real estate—projects. The projects include development of the area above the tracks at Pennsylvania Station-30th Street, Philadelphia, and Penn-Central Park, Pittsburgh. Mr. Jensen was formerly executive vice president, The Lumberman's Co., a real estate development firm in Austin, Tex.

William E. Hussing, sales representative, freight and passenger, Pittsburgh, appointed regional passenger agent, Central Region there, succeeding **John E. DeGrange,** named district passenger agent, Washington, D.C.

RESERVE MINING CO.—George Sennhauser named railroad superintendent, Babbitt, Minn.

ROCK ISLAND.—Leroy O. Ladish appointed regional sales manager—trailer service department, Houston, Tex. His territory will include San Antonio, El Paso, New Orleans and Alexandria, La. Mr. Ladish was formerly assistant sales manager, Seatrain Lines, Houston.

SEABOARD.—Charles K. Robertson appointed district freight agent, Tampa, Fla.

SOUTHERN.—George S. Baron, assistant superintendent, Charlotte-Columbia Division, Columbia, S.C., appointed assistant superintendent, **Cincinnati, New Orleans & Texas Pacific**—St. Louis-Louisville division, Southern, Louisville, Ky. **Charles S. Burnham,** assistant superintendent, Greenville, S.C., transferred to the Charlotte-Columbia division to succeed Mr. Baron.

TEXAS & PACIFIC.—Curtis E. Willis, freight traffic manager-rates, Dallas, retires Feb. 28 after nearly 48 years of service.

UNION PACIFIC.—Ralph L. Clark appointed general traffic agent, Kansas City, Mo., succeeding **Harry M. Back,** who retires Feb. 28, after more than 49 years of service with the UP.

WESTERN MARYLAND.—Kenneth J. Tarvin appointed sales representative, Cincinnati, Ohio. Mr. Tarvin has served as chief clerk for several other roads in the Cincinnati area since 1950.

OBITUARY

M. J. Bernet, 64, president, **International Supply Co.,** Chicago, died at his home in Cleveland on Feb. 10.

Bard Browne, 80, who retired in 1952 as vice president in charge of sales, **Superheater Co.** (now Combustion Engineering Inc.), died Feb. 14, in Ardsley, N.Y.

Andrew L. Cobb, Jr., 72, chairman of the board, **Morristown & Erie,** Morristown, N.J., died Feb. 10 of a heart ailment in Morristown Memorial Hospital.

J. Emiel DeSutter, 56, assistant to vice president and general manager (labor relations), **Union,** East Pittsburgh, Pa., died Feb. 9.

Alvan R. Howard, assistant to freight traffic manager, **Atlantic Coast Line,** Jacksonville, Fla., died Jan. 12.

James Hamilton Pruett, Jr., 59, who retired last November as assistant traffic manager, **Southern Pacific,** died Feb. 3 at Santa Fe Coast Lines Hospital, Los Angeles.

IF YOU'D BET $50,000 TO SAVE ½¢, HERE'S YOUR SEAL:

IF YOU THINK THOSE ARE LOUSY ODDS, TRY TYDEN.

Looking to cut costs? Here's a way: Use flat seals instead of Tydens. You might save up to ½c per seal. But before you call your Purchasing Agent, consider this recent incident. It actually happened. Others like it are happening every day:

A carrier received a sealed shipment. He delivered it still sealed. But cargo was missing. The carrier argued that it couldn't be his fault. "It was sealed when I got it," he said, "and sealed when I delivered it." He had to settle the claim for $50,000.

Why? Because the shipment had been sealed with a flat seal, and the carrier couldn't prove the seal had not been tampered with. We'd like to show you how the flat seal you're using can be opened and closed in seconds without leaving a shred of evidence. A child can do it. Carriers, shippers, insurance men, police, and all thieves know it.

ONLY THE TYDEN SEAL HAS NEVER BEEN OPENED WITHOUT LEAVING CLEAR EVIDENCE OF TAMPERING. ONLY TYDEN STOPS CLAIMS DEAD!

But remember, it costs more. So if you'd bet $50,000 to save that ½c, forget it. Or if you agree those are bad odds, why not write for free samples and details.

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THE TYDEN CORPORATION
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VIVA

The Center Flow Revolution.

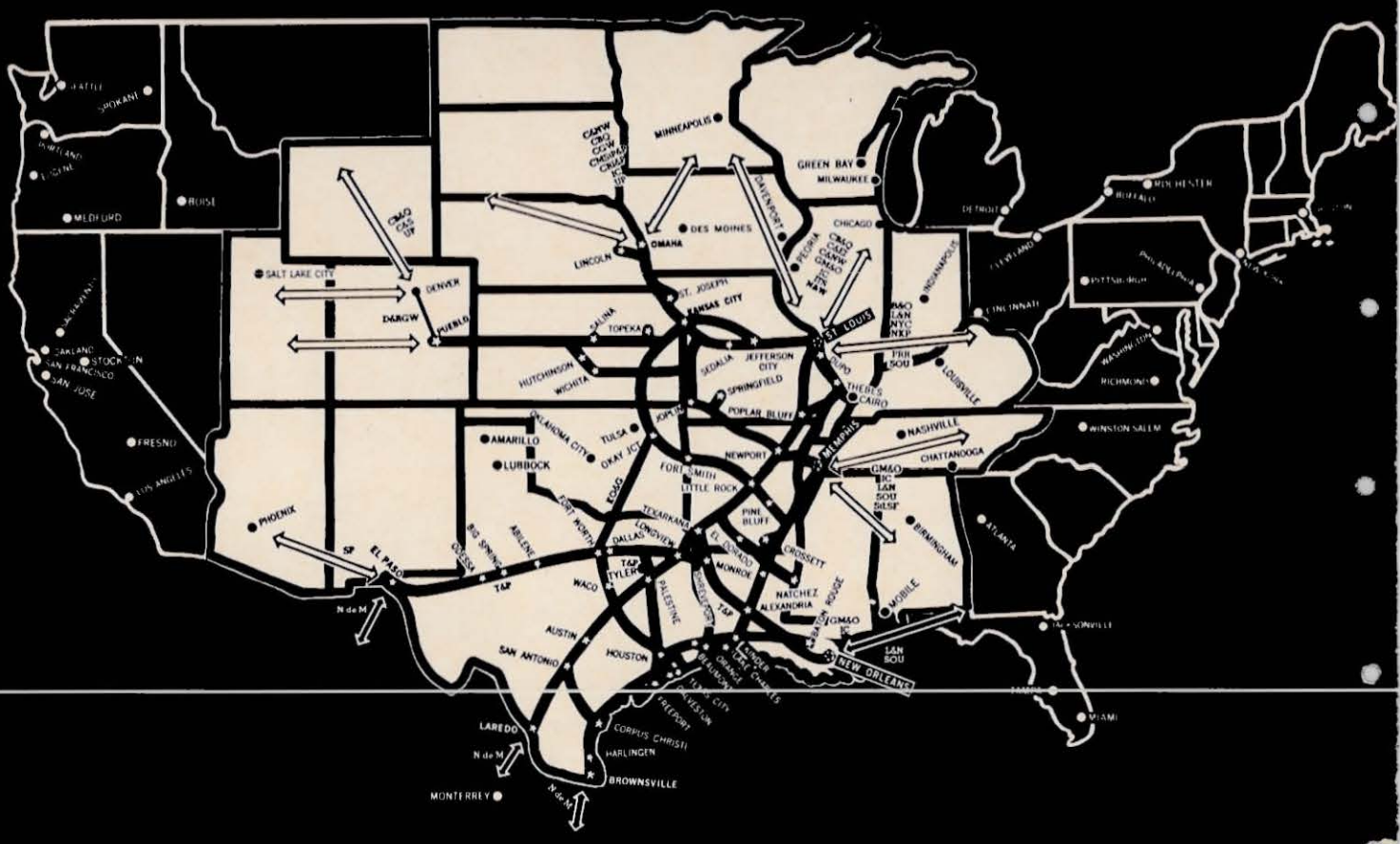
Now we're 19,000 strong.

On to victory! ACF's Center Flow(TM) cars are gaining ground everywhere, as railroad men and shippers discover their revolutionary advantages for dry bulk transportation. Over 19,000 have now been ordered. (Over 7,000 in '66 alone.) How about you? You too can profit from Center Flow's remarkable versatility and fast unloading. Center Flow cars have no sills or carlines to cause hang-up or residue. The unique pear shape gives you fuller use of cube. Sizes up to 5250 cu. ft. meet all your payload requirements.

Hatches and outlets are available for all existing bulk handling systems. You can't beat Center Flow cars, so why not join them? For further information, call or write American Car & Foundry Division, ACF Industries, Incorporated, St. Charles, Missouri 63301.

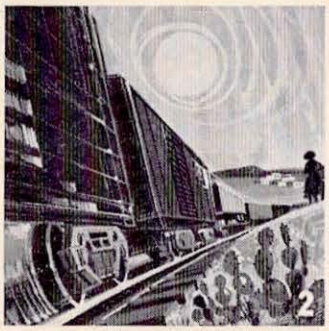
acf ACF INDUSTRIES

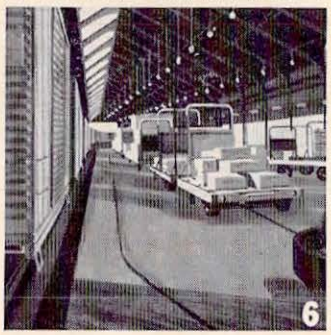
Whether you're shipping from, to or through Mid-America

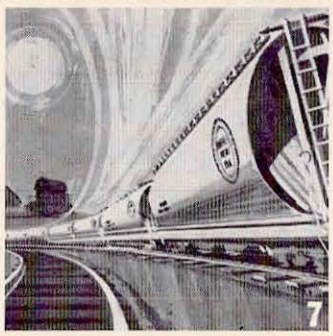


there are nine reasons why MO-PAC is your best move.

Here are eight of them.







1. ENTIRE GULF COAST COVERAGE

MoPac has main line service to 12 principal Gulf Coast ports . . . with Import/Export Information offices in 78 cities throughout the U.S., to help solve your overseas shipping problems.

2. MAJOR MEXICO GATEWAYS

Brownsville, Laredo, El Paso ...each is served daily through coordinated rail/truck facilities. You'll find MoPac an easy link between the U. S. and many lucrative Mexican and Central American markets.

3. COMPLETE PIGGYBACK FACILITIES

MoPac has 7 Piggyback Plans that cover nearly every conceivable carrier/shipper combination. If none fits your need, let's talk. With 59 ramps systemwide, we surely can work out a plan that's satisfactory to you.

4. MISSISSIPPI RIVER CROSSINGS

In expediting westbound shipments from the East and Southeast, MoPac System offers three fast, major crossovers: St. Louis, Memphis and New Orleans.

5. ELECTRONIC CLASSIFICATION

Through the wizardry of electronics and computerization, MoPac selects, classifies and groups entire blocks of cars bound for a specific destination. Such "pre-blocking" means far faster train make-up and cuts hours off delivery schedules.

6. NO-MINIMUM LCL/LTL SERVICE

Four strategic break-bulk locations . . . automated handling . . . new as well as expanded ramp, rail and truck facilities and stepped-up schedules . . . mean that your shipment hardly touches the floor from shipping point to destination.

7. CUSTOMIZED CARGO CARRIERS

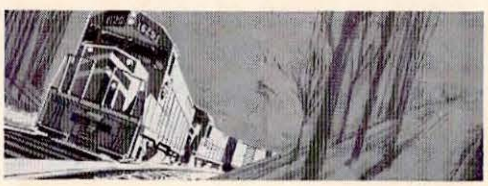
MoPac offers a continually growing fleet of special freight cars. Designed for maximum efficiency and safety, they offer more economical transport for cargo such as frozen foods, bulk grains, lumber, autos, appliances, oversize machinery and chemicals.

8. "DEADLINE" SCHEDULES—WITH WEST COAST CONNECTIONS

Examples: **From St. Louis,** 2nd AM delivery as far west as El Paso and Denver; 3rd AM at Los Angeles; 3rd PM arrival at San Francisco. **From Memphis:** 2nd AM as far as El Paso; 3rd AM at Los Angeles; 4th PM arrival at San Francisco. **From New Orleans:** 2nd AM as far as Brownsville; 3rd AM at El Paso; 4th AM at Los Angeles.

THE NINTH REASON?

It depends on your own special shipping problem. Whatever it is, we're confident we've the facilities and flexibility to solve it. To make us prove it, contact your MoPac representative or F. J. Conrad, our V.P.-Traffic, Missouri Pacific Bldg., St. Louis, Mo. 63103. He'll be happy to accept the challenge.

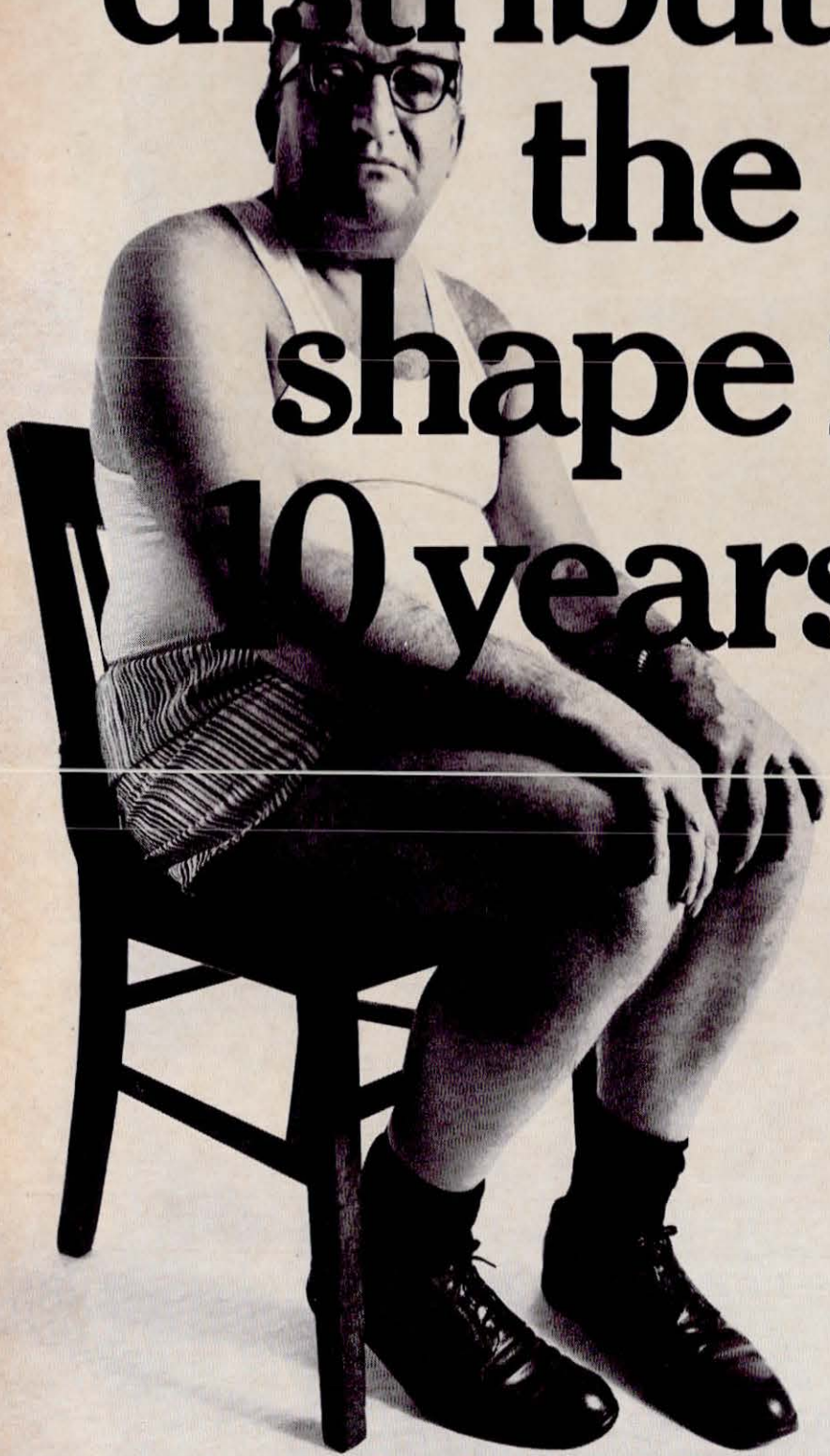


mo-pac

MISSOURI PACIFIC TEXAS & PACIFIC

Circle 11 on reader service card

Is your physical distribution in the same shape it was 10 years ago?



Chances are, you have a check-up every year. Well, why not treat your company the same way?

Why not give it a check-up once in a while. A physical distribution check-up. After all, a company's distribution gets out of shape, too.

And that's where our New York Central Physical Distribution Specialists come in.

Their job is to help you with your physical distribution problems.

They can help you with plant location and re-location. They can help you reduce transportation and warehousing costs. They can help give you a dynamic, yet practical approach to your company's traffic and material management needs.

If you'd like to have our specialists give your company's physical distribution a check-up (at no cost to you), call your New York Central Freight Sales and Service office.

It could be just what the doctor ordered.

NEW YORK CENTRAL SYSTEM

WHEN YOU NEED THEM, WE INVENT THEM

It's what Stromberg-Carlson has been doing for a long time . . . meeting communication problems with modern, up-to-the-minute answers.

We invented 6 new types of communication systems especially for railroads.

Message Circuit Dialing—first dramatic step forward in providing automatic dial communication to and between way stations . . . eliminates costly and time-consuming operator handling.

761 Carrier System—further improvement in handling message circuit traffic, reduces loads on these circuits up to 75%. This transistorized, medium-haul, open-wire carrier system upgrades way stations operating with 35-40 parties per line to just 10 parties or less per line.

Dispatcher Tone Signaling—a major improvement providing instant communications with your key people responsible for train operation.

Motorswitch 4-Wire Switching—first system to provide unlimited tandem switching with maximum circuit efficiency. Based on your unique requirements it can dramatically upgrade quality of service.

S-C RR Switching System Control—the "brain" that can be added to your present communication system. It integrates your entire system into the most effective network possible. Cuts operating time to a minimum. Provides system-wide uniform directory numbering and multiple routing.

Railroad PABX Systems—first PABX systems with features designed specifically to meet the needs of railroad communications.

For data on our systems and backup services, contact the specialists: Industrial Sales, Stromberg-Carlson, Rochester, N. Y. 14603. (716) 482-2200.

Stromberg-Carlson

A SUBSIDIARY OF GENERAL DYNAMICS CORPORATION

Jean W. Arnold
Kershaw

Edwin L. Marmon
Thrall

SUPPLY TRADE

Jean W. Arnold has joined the **Kershaw Manufacturing Co.** as vice president and general manager, at Montgomery, Ala. Mr. Arnold has been connected with the **Koehring Co.** for the past 11 years as president and general manager, Thew-Lorain Division; as president and general manager, Parsons Division; and vice president of manufacturing, HPM Hydraulics Division.

Dawson Burwash has been appointed managing director of **Kershaw Canada, Ltd.**, Montreal, Que.

Edwin L. Marmon has been named assistant vice president, sales, **Thrall Car Manufacturing Co.**

Ralph E. Johnson has been named manager of engineering and manufacturing, **Poor & Co.** He was formerly manager of manufacturing engineering and assistant to the vice president of operations, **Crane Co.**

A. T. Adams has been appointed staff consultant for handling systems, **Austin Co.**, Cleveland. Mr. Adams was formerly container systems consultant for **General American Transportation Corp.**

Walter W. Walb, vice president, **American Hoist & Derrick Co.,** St. Paul, Minn., and general manager, Fort Wayne Machinery Division, has been elected chairman of the board of directors. **Kenneth F. Potter,** vice president—engineering, has been elected executive vice president. **Archer W. Brown,** chief engineer, has been elected vice president—engineering. **Richard L. Stryker,** sales manager, has been elected vice president—sales.

Robert E. Alexander has been promoted to assistant manager of product engineering, **Lord Manufacturing Co.,** Erie, Pa. **Richard A. John** succeeds Mr. Alexander as product manager for shipping container and shipboard mounting applications.

C. J. Moore has been appointed general manager, industrial group, **Electric Storage Battery Co.,** Philadelphia, succeeding **M. G. Smith,** retired.

Edward M. Vogel has been appointed sales manager, **Litewate Transport Equipment Corp.,** which was recently formed to manufacture integrally molded, reinforced plastic cargo containers, van bodies and transport tanks. **George R. Freund** is president of Litewate, which has executive offices at Chatham, N.J., and will manufacture its products under the trade name MONOX in Milwaukee. Mr. Vogel was formerly industry manager, Heyden Division, Tenneco Chemicals, Inc.

Joe A. Bole, assistant to vice president—Western sales, **CF & I Steel Corp.,** has been named general manager of sales, Western Division, Denver, Colo.

INDUSTRIAL TRAFFIC

H. P. Sibert, secretary—treasurer—traffic manager, **Alabama Mining Institute,** Birmingham, Ala., retired Feb. 1. Prior to joining the Institute in 1937, Mr. Sibert served for 21 years with the **Southern, Central of Georgia** and **Illinois Central.**

Herman C. Jacobsen has been named manager of transportation, Distribution Department, **Velsicol Chemical Corp.,** Chicago, succeeding **William Spaulding,** retired.

Robert K. Croll has been appointed assistant manager—distribution and planning, traffic department, **Allied Chemical Corp.,** New York. Mr. Croll was formerly director of engineering, Industrial Chemicals Division.

R. M. Boyd, vice president, traffic and transportation, **Pittsburgh Plate Glass Co.,** has announced the following appointments: **James E. Weaver,** manager of transportation and terminals; **William L. Hammond,** assistant manager; and **Franklin T. DeWoody,** superintendent of terminals. Mr. Weaver was formerly manager of transportation; Mr. Hammond was manager of packaging and terminals, chemical division, Pittsburgh; and Mr. DeWoody superintendent of terminals and marine transportation, Lake Charles, La.

"I feel much safer with them on the job. They've got the experience, a full line of tie-downs for any lading . . . it's their only business."

Brandon Equipment Company, 332 S. Michigan Ave., Chicago, Ill. 60604
Load securement is our only product!
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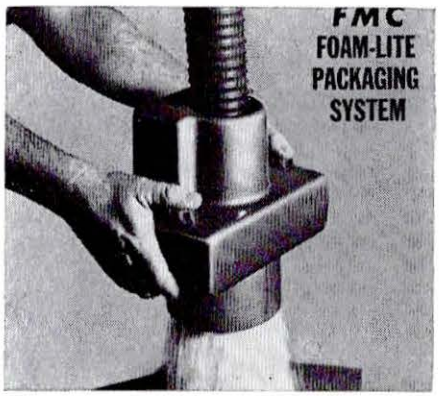
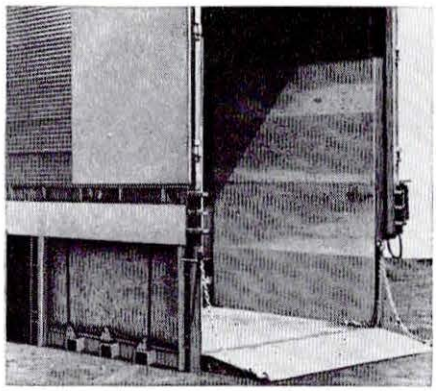
NEW PRODUCTS REPORT



Protective Packaging (RA-1)

With the Foam-Lite packaging system adhesive-coated plastic beads are sprayed to form a one-piece cocoon cushion around fragile parts for shipping protection. The cocoons follow the contours of intricate and odd-shaped parts to give all-over cushioning. Thicknesses are varied to suit weights and fragility requirements. Permanent bead adhesion further prevents protected parts from shifting or settling to bottom of containers during transit. *FMC Corp.*

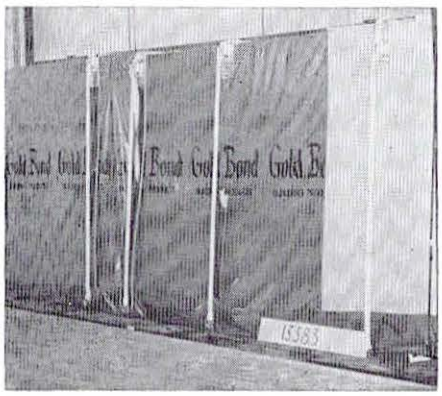


Van-Floor Lift (RA-2)

With the floor lift for stainless-steel vans, one man, it is said, can load or unload bulky or palletized items at any position between ground and trailer-floor deck. The lift is 81½ in. wide, and 96 in. deep. Maximum load capacity is 6,000 lb. Lift is powered by a gasoline-driven engine with an electric start located in an underslung cabinet on roadside of trailer. Two control switches permit operation of lift from inside or outside of van. *Fruehauf Corp.*

Box Car Loader (RA-3)

Boxcar Specials, short counterweighted versions of solid-cushion tire SpaceSaver 60 to 70 lift trucks are designed to load and unload box cars. They have same ratings as "60" and "70" models—6,000 and 7,000 lb respectively at 24-in. load center. Turning radius on former has been reduced 6½ in. and on the latter by 8 in. through use of a shortened lead-filled counterweight. "Specials" can also be equipped with same hydraulic attachments. *Hyster Co.*



Cargo Tie-down System (RA-4)

Wrench-drive ratchet buckle tensioning devices, dacron web strapping, and special corner plates comprise the Cargo Control system which reduces damage to gypsum board shipped on bulkhead flat cars to less than 0.3% on hauls where claims had previously run 5% or more. Man-hour savings were 20%. Tie-down assemblies are permanently affixed to car and can be stored in special compartments. Buckles are integral components of corner plates. *Aeroquip.*

Transport Refrigeration (RA-5)

Basic components of Model 250 undermount diesel transport refrigeration unit are retained in Model 250C, but latter has only three switches to operate; the former, six. Tubular frame mounts to trailer, becoming virtually a part of trailer frame. Undermount can maintain constant temperature control between −20 and +80 deg. Unit is available with: Model 100 evaporator; Perkins Four/99 engine; or Mercedes diesel OM636 engine. *Transicold Corp.*

RAILWAY AGE
WEEKLY

30 Church Street, N.Y., N.Y. 10007 READERS' SERVICE (Att. George Johnson)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

PLEASE SEND INFORMATION ABOUT PRODUCTS DESCRIBED ON PAGE 61 MARKED RA-1 RA-2 RA-3 RA-4 RA-5

NAME ..... TITLE.....

COMPANY .....

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CITY ..... STATE..... ZIP.....

2/27/67

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Fast, cross-country freight movement the Santa Fe way leaves little to chance. In fact, all the factors—freight, rolling stock, schedules and even the motive power—are programmed and watched over by the Santa Fe's far-flung electronic system. Precise, dependable General Motors locomotives, 3600 horsepower SD-45s, play a vital role in this advanced traffic system.

GM
MARK OF EXCELLENCE

Electro-Motive Division
La Grange, Illinois

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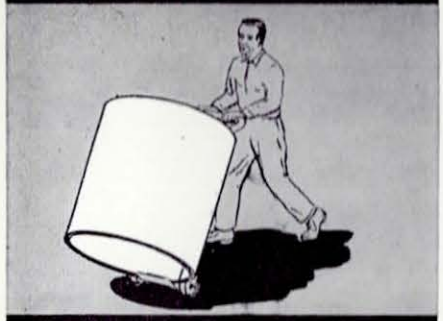
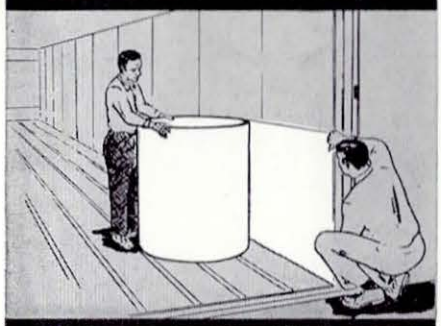
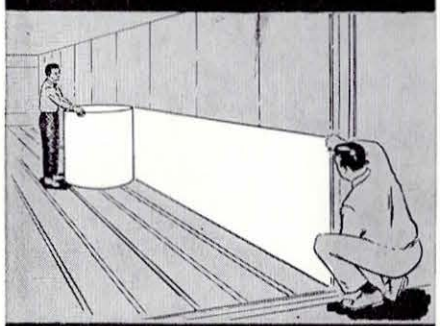


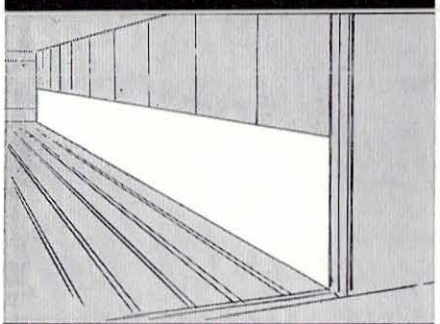
SCUFF PLATE



IS AVAILABLE



THE LENGTH



OF YOUR UNIT

High strength, Glasbord Scuff Plate for piggy-back trailers, containers, freight cars. Dry freight and refrigerated vans — M.I.D. Accepted.

For complete details request Bulletin No. 67.

kemlite **KEMLITE CORPORATION**

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LETTERS FROM READERS

Passenger service

Toronto, Ont.

To the Editor:

It is indeed a pleasure to read your comments on the passenger problem. I do think your positive approach to passenger service will certainly have considerable influence on railroaders, businessmen, and lawmakers alike.

Many present services despite the best efforts of their operators are quite hopeless and should be discontinued. In this context I could mention the Erie Lackawanna's fine "Phoebe Snow" and certain of the equally good services of the Chesapeake & Ohio now up for abandonment. The traffic potential is just too limited.

On the other hand there have been a number of operations that had potential that were prematurely abandoned through lack of efficient marketing. There are a number of services today that can with encouragement survive in a highly competitive market and even expand by meeting public need. I certainly agree with your praise of Pennsylvania Chairman Stuart Saunders' commitment of substantial railroad funds on the Northeast Corridor project. This is private enterprise at its best and it should be brought to the attention of the public.

It is all very well to try to correct the injustices brought about by "subsidized competition" but the future of a free enterprise railroad system in North America hinges on what the railroads can do for themselves and the traveling and shipping public. Public needs—whether they be rapid transit, commuter service or high-speed intercity transportation in congested areas—must be provided for. If one body cannot or will not provide them, another will. The ideal way to provide the needed services is in a spirit of cooperation like that provided by Mr. Saunders. . . .

Carl V. Ehrke
Canadian National Passenger Sales

DIVIDENDS DECLARED

ATLANTIC COAST LINE.—75¢, quarterly, payable March 14 to holders of record Feb. 28.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Preferred A, $1.25, quarterly, payable March 22, June 21, Sept. 20 and Dec. 20 to holders of record March 3, June 2, Sept. 1 and Dec. 1, respectively.

CLEVELAND & PITTSBURGH.—4% Guaranteed, 50¢, quarterly; 7% Guaranteed, 87½¢, quarterly, both payable March 1 to holders of record Feb. 10.

DENVER & RIO GRANDE WESTERN.—27½¢ quarterly, payable March 13 to holders of record March 1.

FOR FAST READING SERVICE OR COMPLETE INFORMATION ON OUR FACILITIES CONTACT:

ATLANTA, GA. 30303
G.E. Shivers, Regional Sales Manager
930 Healey Building

BOSTON, MASS. 02110
W.F. Dervan, Regional Sales Manager
1510 United Shoe Building

BUFFALO, N.Y. 14203
M.F. Hickey, Regional Sales Manager
925 Ellicott Square Building

CHICAGO, ILL. 60604
W.A. Gehl, Regional Sales Manager
T.J. Palka, Western Reg. Sales Manager
T.O.F.C. Service
Room 673—208 South LaSalle Street

CINCINNATI, OHIO 45202
D.D. Sylvester, Regional Sales Manager
1231 Carew Tower

CLEVELAND, OHIO 44114
J.W. Poland, Regional Sales Manager
512 Park Building

DETROIT, MICH. 48226
W.R. Herman, Regional Sales Manager
1234 Lafayette Building

NEW YORK, N.Y. 10007
724 Woolworth Building
T.J. White, Regional Sales Manager
T.F. McLaughlin,
Regional Sales Manager—Coal Traffic
J.A. Creighton,
New York Regional Sales Manager
T.O.F.C. Service, Port Reading, N.J.

PHILADELPHIA, PA. 19107
Reading Terminal
R.H. Weinsheimer, Regional Sales Manager
P.R.Fagan, Director of Sales—Foreign Traffic
A.W. Nemenz, Director—Coal Traffic
W.C. Noble, Dir. of T.O.F.C. &
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In less than a second

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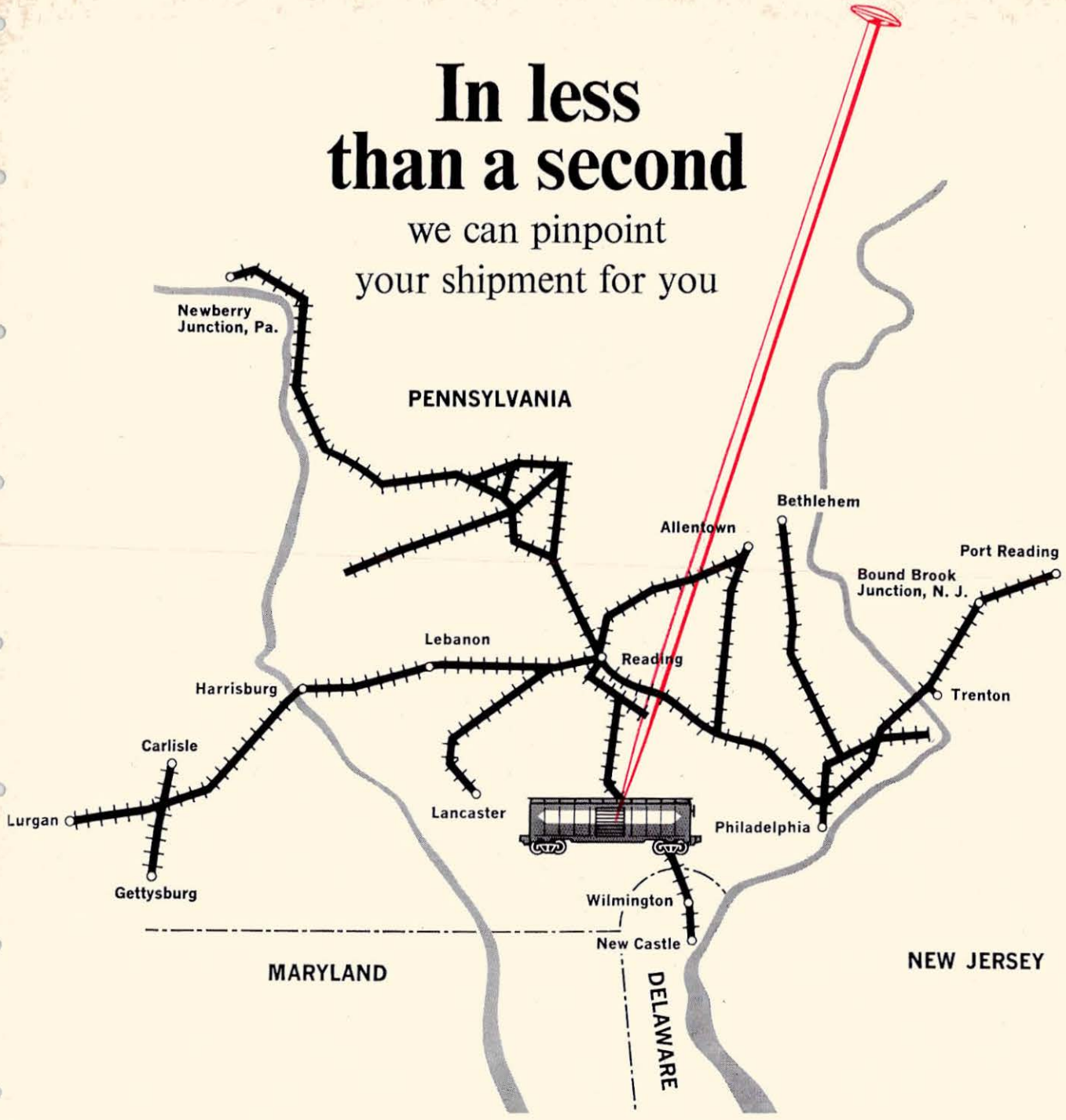

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How? With TRACE, our new computer system. Into it go all the data on *every* shipment on Reading rails and every Reading movement. The moment your shipment reaches our lines, its progress toward destination is fed in continually, step by step. And is available to you at the touch of a button.

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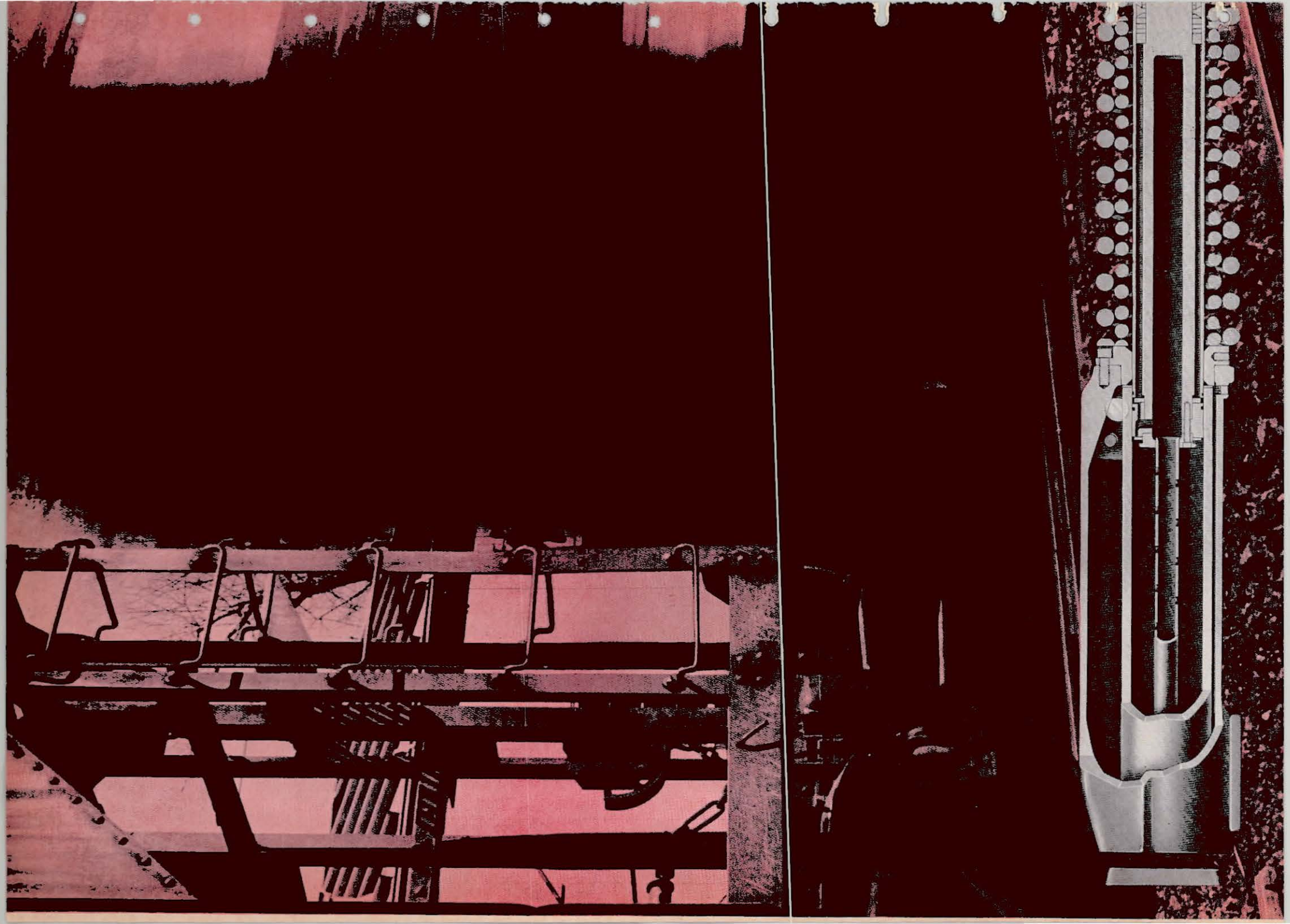

NATIONAL 3C* CUSHIONING smooths away impact shocks before they damage lading

Gross weights zoom upward. Impacting speeds go no lower. A complex problem in L&D control to which there are two simple solutions: National 3C-Gliding Sills, or National 3C Hydraulic Units. National 3C Cushioning is the practical, economical way to whip the damage control problem now.

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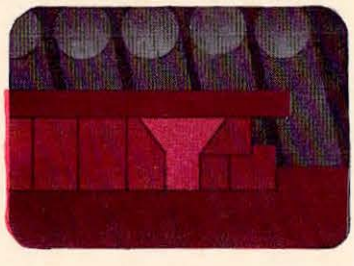

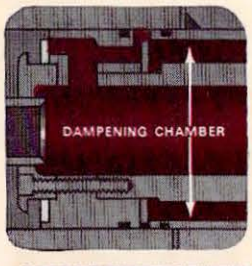

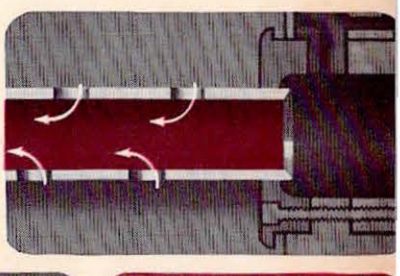

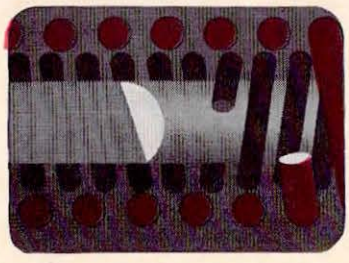

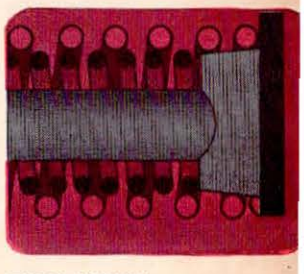

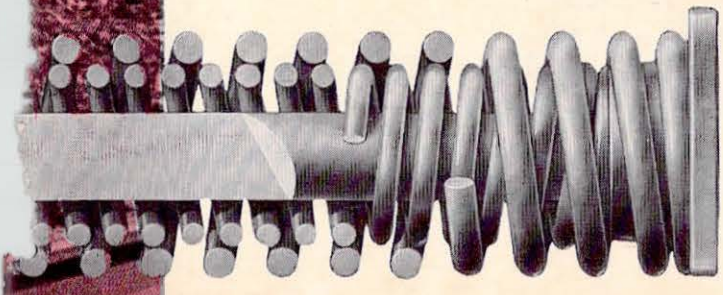

POSITIVE ACTION return-to-normal spring assures unit is always ready for impacts.

EXCLUSIVE BALL-JOINT ends prevent unit from cocking in sill.

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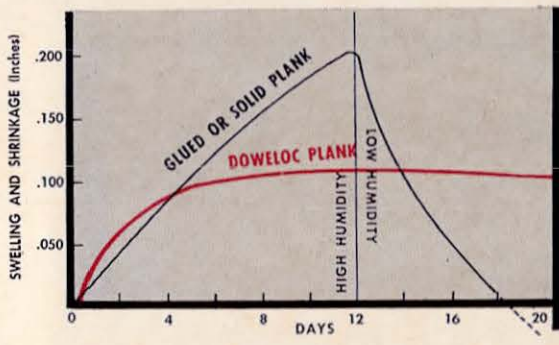
Greater Stability

than any box car decking on today's market!



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"In our extensive tests on Doweloc, (Project G-27) we are pleased to report its exceptionally fine performance. One of its greatest advantages is dimensional stability. In a test where 20% moisture content was developed and thereafter allowed to dry to 8%, the shrinkage across a 6″ piece was found to be negligible — *only 1/100th inch.* The curve illustrates expansion and contraction of a glued or solid plank compared to your product. The outstanding stability of Doweloc is evident."

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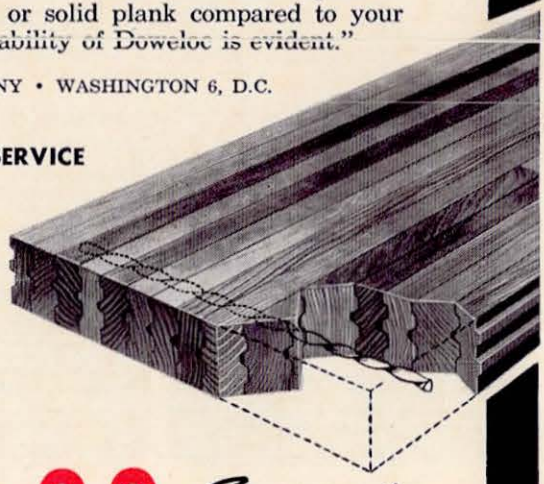
Doweloc is the only laminated, edge-grain, tongue-and-groove plank locked by aluminum dowels for minimum expansion and contraction.



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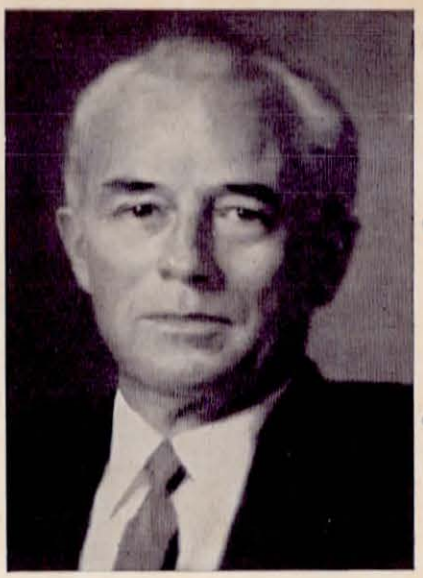

"It's good business to help colleges"

"Business has a direct and pressing need for colleges of high calibre. Carnation recognizes that its success tomorrow depends in large part upon the quality of the college graduates it hires today. We also benefit from the continuing stream of ideas and information which college researchers provide.

"Colleges are faced by the continuing pressure of higher costs due in large part to the demands of a more complex technology. To maintain their standards and to fulfill their crucial role, they need increased support by business.

"Carnation now provides voluntary financial aid to more than 125 colleges and feels that this is one of its best investments for the future."

H. E. Olson, President
Carnation Company

A major problem in the education of students is rising costs. If companies wish to insure the availability of college talent, they must help support colleges with financial aid.

SPECIAL TO CORPORATE OFFICERS — A new booklet of particular interest if your company has not yet established an aid-to-education program. Write for: **"How to Aid Education—and Yourself"**, Box 36, Times Square Station, New York. N. Y. 10036

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9500 miles from Danang, Americans are fighting another enemy.

Inflation is a threat to every family's paycheck . . . to the strength of our nation itself. And while other Americans are engaged in the fight for freedom half way around the world, we must be increasingly alert to the dangers of inflation here at home.

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in your plant . . . promote the PAYROLL SAVINGS PLAN for U.S. Savings Bonds

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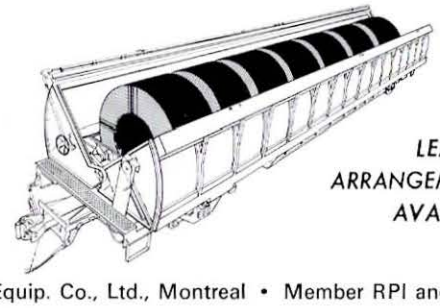
". . . the first major advance in coil steel cars in ten years."

The P&LE has ordered 50 of these 125-ton, integral cover, coil steel cars from Evans. According to Curtis D. Buford, President of the P&LE, "These cars represent the first major advance in rail coil steel cars in ten years. With these new cars, the P&LE expects to expand its penetration of the coil steel market by giving present and potential customers a revolutionary car that can be loaded and unloaded with greater convenience, and less cost per ton of steel than heretofore possible."

During our production run of these cars for the P&LE, why not consider your own needs? These cars, or the same cars equipped with lift-off covers, are available for sale or lease.



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16

RNAL

42% Return on investment

College Yield to Stay High, If Business Helps

It's called one of the shrewdest investments business ever made—the college contribution.

It has paid the best dividends business ever got—the 42% of college-educated leaders that business employs, every year.

A real human potential. Leader stuff. Bright with brainpower, brimming with skills. Able to fill management posts.

But can it go on, can the colleges guarantee the supply?

Higher education is in trouble. Costs are skyrocketing. On the average, tuition fees cover only about ⅓ of the educational cost.

What is needed?

More business giving. Unrestricted giving. Business can gain even more by raising the quality of education to an all-time high.

If business wants college talent, it must help keep the colleges in business.

Your aid-to-education program is an aid to yourself.

tant

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COUNCIL FOR FINANCIAL AID TO EDUCATION

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Write for: **'HOW TO AID EDUCATION—AND YOURSELF.'** Box 36, Times Square Station, New York, N. Y. 10036.

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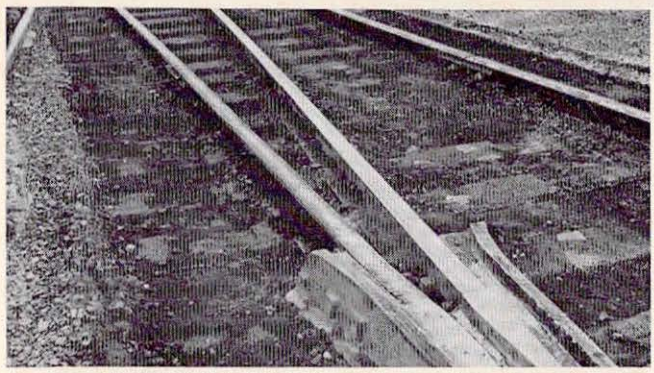

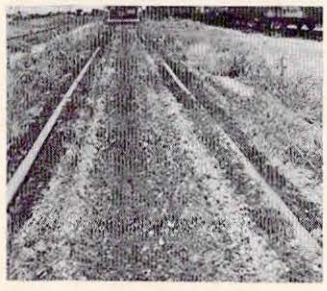

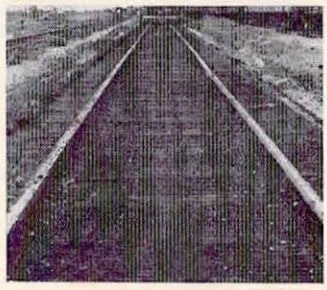

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- Requires only one track while working
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THIS NEW BROOM SWEEPS REALLY CLEAN

Revised accounting system is called key to profits

The railroads and others in the transportation field can improve profitability through a drastic revision of the present Uniform System of Accounts coupled with the employment of "a sharper accounting pencil" by individual companies, according to a top accounting executive.

J. E. Meredith, partner in the accounting firm of Lybrand, Ross Bros. & Montgomery, told the Transportation Management Club of Boston that "the uniform system should be revised in order to accelerate the development of profit planning and control systems for transportation companies." But, he added, transportation companies can't afford to await this event.

"In order to provide better information for decision making, profit planning and control, changes are required in our management accounting systems because the present regulatory system is inadequate for the job to be done."

Meredith also called for a broad education program for the entire transportation industry to enable companies to harness new developments, such as computers, management sciences techniques and economic analytical techniques, and to incorporate them into management information systems.

It is important, he added, that all echelons of management be trained in the potential use of these new tools for information system formulation.

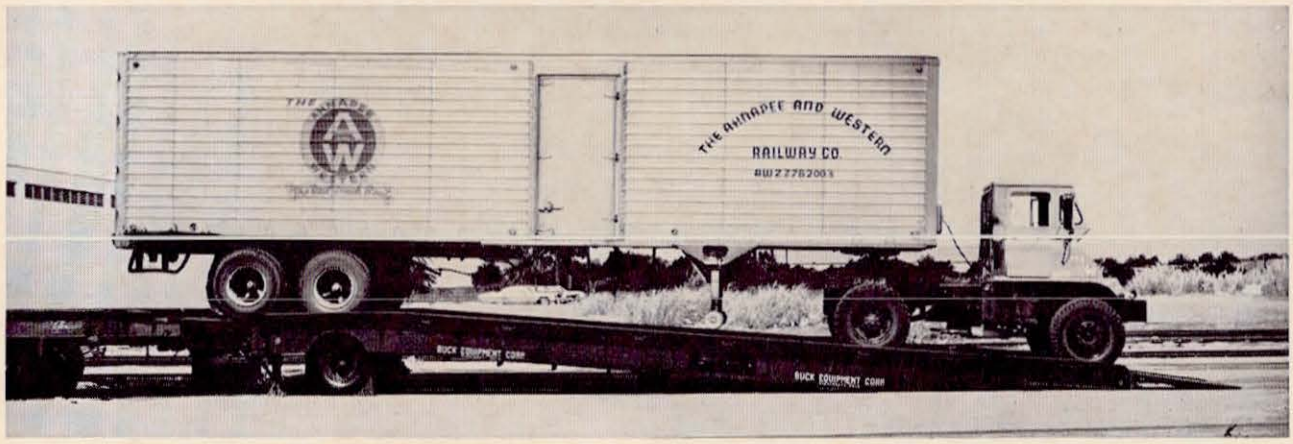
"The primary test of an accounting system is in its usefulness to, and use by, management in its job of decision-making and control of operations," he said. "The development of information for the public and for regulatory authorities need not be inconsistent with the primary purpose."

He cited two "basic defects" in the uniform system of accounts. On one hand, he said, the system "does not facilitate the development of data for decision costs and control costs," and, on the other, it "requires companies to develop costs according to standardized definitions of cost and formulae which often have little relevance to specific operations."

He said that what is needed is a system of accounts that permits the identification and accumulation of revenues and costs with activities, responsibilities, geographic factors, type of equipment and services.

The key to the financial control, he added, is an accounting system that provides pertinent information on a routine basis and at the same time classifies this data in a form readily usable for special decision-making analyses. Through greater flexibility and scope than provided by the present uniform system of accounts, he pointed out, the new system would overcome the existing deficiencies by: classifying items in smaller, more discrete modules; providing techniques to develop standards required for comparison; providing a means of comparing the actual results with the standards, and providing data for more reliable indications of cost behavior.

Implementation of the new accounting system can be accomplished by adopting a segment at a time in accordance with an over-all plan, Meredith said. In addition, he said, "mathematicians and the ultimate in computers" are not required since "programs are available as packages and computer time can be rented economically." ■



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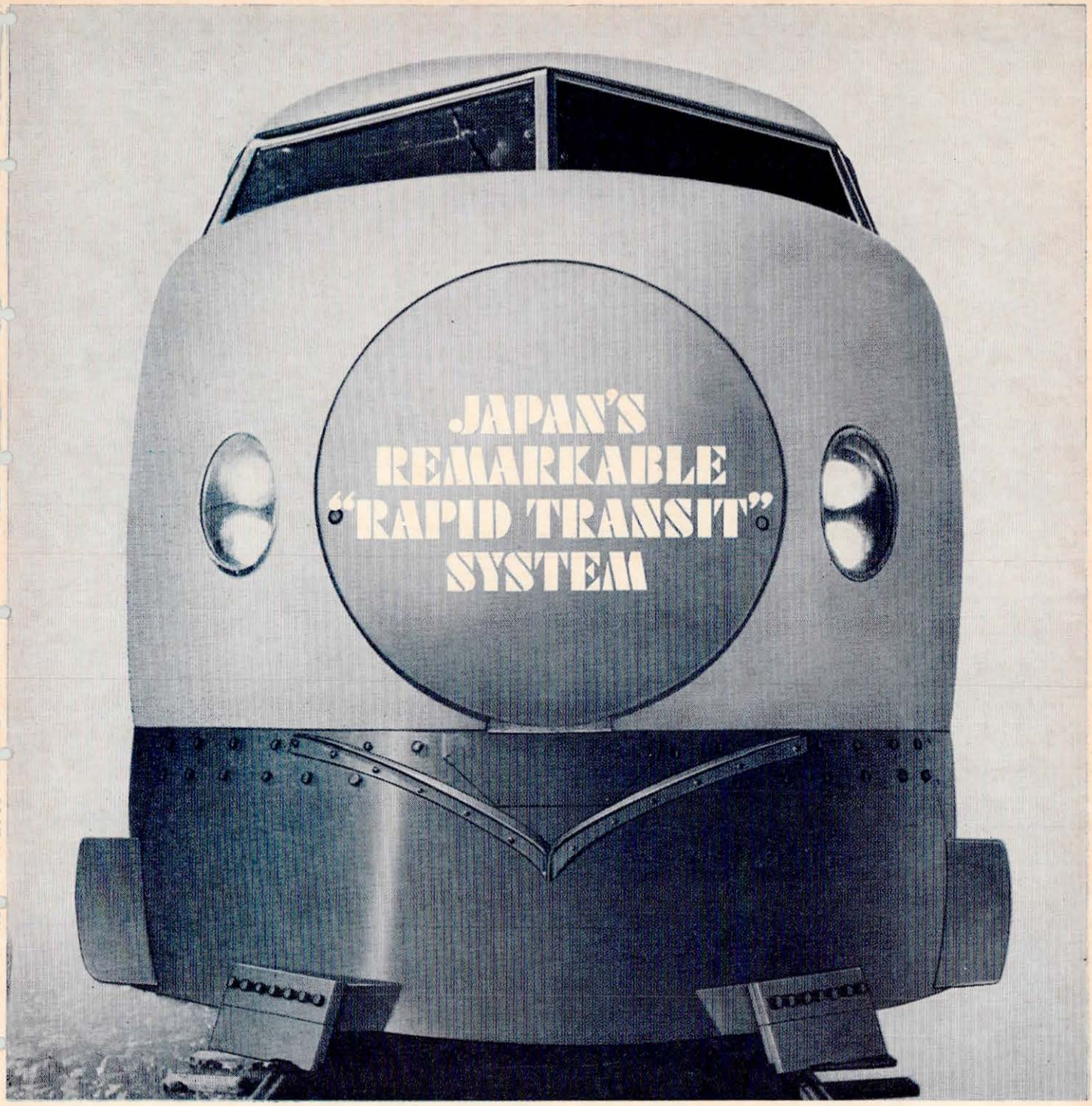

At 130 mph, it goes the 320 miles between Tokyo and Osaka in three hours and 10 minutes, and the way tickets for it sell you'd think it was the Olympic Games.

Is Japan's New Tokaido Line a *genuine* system of rapid transit? Or just the world's fastest railroad? Probably both, if you consider facts like these:

Along the line's scenic miles are nearly one-half of Japan's 100 million people. And her six largest cities. Plus the overwhelming proportion of her major heavy industry.

No matter what you call the New Tokaido Line, Japan needed it.

Sumitomo's interest in this remarkable railroad goes back to the day it was conceived on paper. Then, at the request of the Japanese National Railways, we manufactured the wheel and axle units, the driving gear units, the air springs and automatic couplers.

Today, there isn't a train in Japan that doesn't roll on Sumitomo wheels. Today, our modern Osaka Works is capable of turning out one-third of the world demand for solid rolled wheels. It is, in fact, the world's largest wheelmaking plant. From Sumitomo each year comes thousands of tons of wheels — safe, light, quality wheels in sizes from 550mm to 1,300mm, guaranteed to conform to any National Standard, yours included.

Remember this the next time you set out to build a rapid transit system. Or just a very fast railroad.

SUMITOMO METALS
SUMITOMO METAL INDUSTRIES, LTD., TOKYO, JAPAN

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Era of car cushioning began 10 years ago

(Continued from page 35)

placed with a spring inside the cylinder. A boot was installed on the hydraulic cylinder to prevent the entry of outside foreign matter. The capacity of the return spring was considerably increased.

By a year later, full-scale production of the device (with 10-inch and 12-inch travel) began altering the course of freight-car theory and design throughout the industry as roads like Chesapeake & Ohio, Missouri Pacific, Louisville & Nashville and others began buying the devices in quantity. By 1960, Hydra-Cushion, Inc., introduced 20-inch travel. Competitive cushioning devices were developed and introduced by other railway suppliers. Initially, the devices were largely for installation in box cars. But after 1964 the devices were adapted for use in tank cars, flat cars, coil cars and high-cube equipment. Experts estimate that approximately one-tenth of the U. S. carfleet has already been equipped with one kind of cushioning or another.

Practically all the closed cars that SP has purchased since its first order for cars equipped with Hydra-Cushion underframes have been so equipped. Further, SP has extended use of the device to flat cars and to auto-rack cars. W. D. Lamprecht, vice president-systems operation, cited reductions in claims because of the use of the devices that showed up in a six-month check of experience with 3,813 cars. "Average claims per trip were $3.86—compared with an average claim of $12.11 for standard cars handling the same commodities."

Of course, as MacCurdy is quick to point out, the economic justification for original installation of the devices was both difficult and an act of faith. "The devices are not cheap—even though production economies have enabled a 30% reduction in unit cost since early orders. The idea of tackling the L&D-prevention problems of railway equipment with a device whose capitalized cost perhaps approached the cost of claims themselves required both vision and courage. Surprisingly, great values in the device's ability to prevent damage to rolling stock is a prime part of decisions to equip cars with cushion underframes. The competitive values inherent in keeping shipments undamaged are also considerable."

• **A durable device.** MacCurdy also points out the fact that accumulated experience is helping shape the many decisions by railroads that go into the evolving shape of the carfleet tomorrow's railroads will have. "The original cars—the prototypes put into experimental service by the SP—are still in revenue service performing adequately in the areas of performance they were created for.

"Some railroads argue that the devices are most valuable because of their ability to prevent damage to equipment. As more and more of the fleet is equipped with such devices, you tend toward an ideal where, if all cars were equipped with cushion-underframes, you would have almost doubled cushioning for all impacts. There are also possibilities for significant weight reduction in cars—at least in theory."

Are there any mechanical or economic changes in sight that may alter the present trends? MacCurdy sees only greater pressures in the areas that have already structured the present answers.

The industry's decision to go after quality-control via the cushion-underframe devices has already made possible the mounting of quality-control programs for specific commodities that were almost unthinkable ten years ago. Competitive success stories in the fight for traffic are rooted in the work that SP sponsored at the Stanford Research Institute. Perhaps more importantly, the experience of the last decade is enabling the carriers to ask new questions of more industry-wide validity. Quality-control technique in transportation changes, as MacCurdy points out, as more and more of the carfleet is equipped with impact-absorption devices. As more and more traffic is handled by equipment with higher-and-higher average performance characteristics, there will be less-and-less need for the special work and effort to steer damage-prone commodities into a limited number of cars. Such trends will allow much heavier loadings with a lower claim average per unit of transportation produced. The 10th anniversary of the cushion-underframe that finally made cushioning a big factor for new equipment has to be one of the most significant anniversaries in the annals of the industry. ■

150,000 LBS. PLUS
on one SIDE BEARING
demands the TOUGHEST
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RPI RAILWAY PROGRESS INSTITUTE

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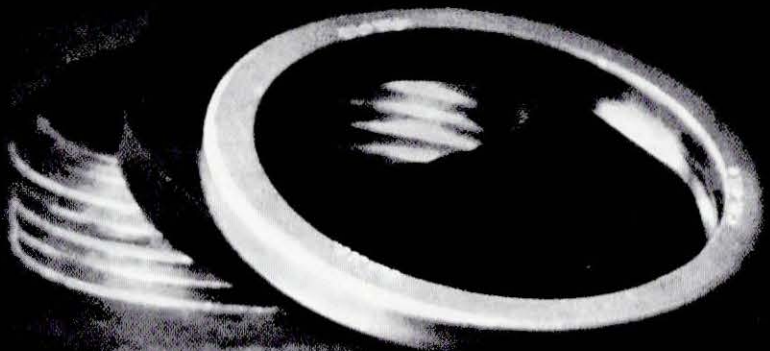
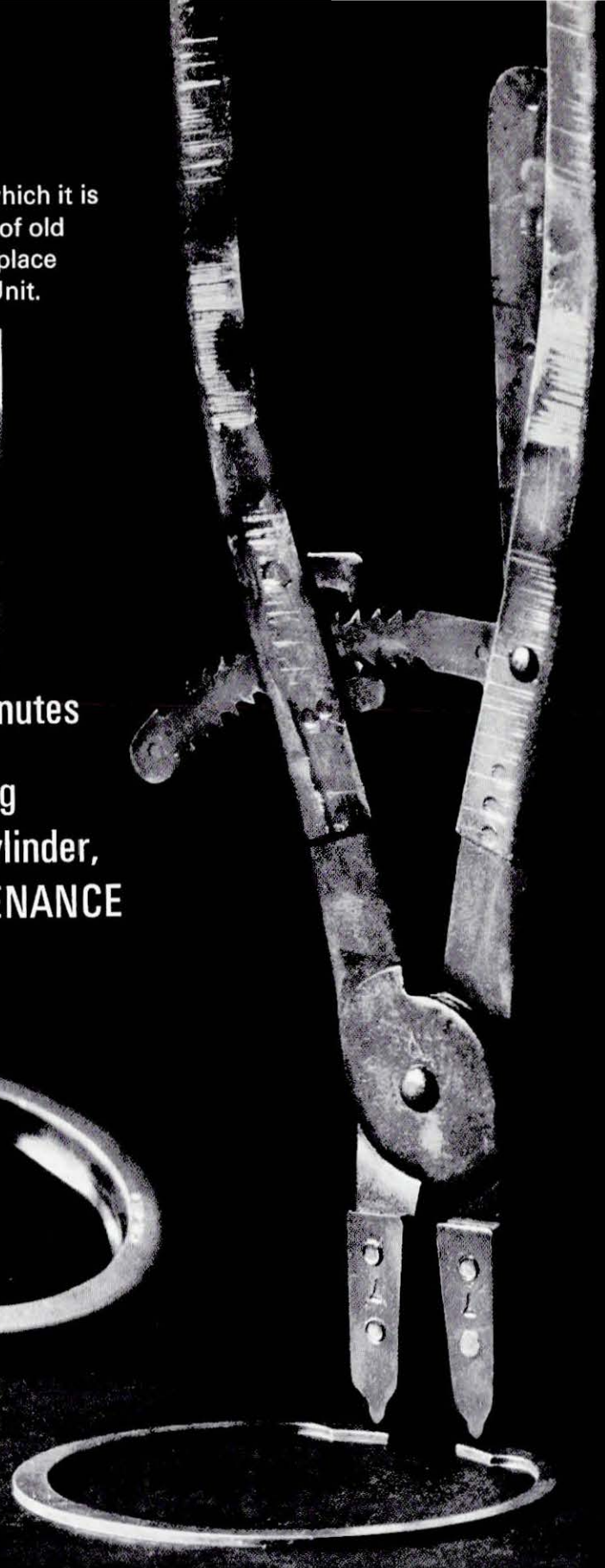
Sometime, before the car in which it is installed is scrapped because of old age, it may be necessary to replace the oil seals in the Keystone Unit.

It takes about 30 minutes

...other than checking the oil level in the cylinder, NO OTHER MAINTENANCE IS REQUIRED!



Over 34,000 Keystone SHOCK CONTROL Units are specified for service on American and Canadian Railroads



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Manufacturing: Camp Hill, Pennsylvania 17011

Sales Offices: San Francisco, California • Chicago, Illinois • St. Paul, Minnesota • St. Louis, Missouri • Omaha, Nebraska
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John Stevens, generally referred to as the "Father of the Railroads in the United States."

Important First in Railroading

The best place to start any series is at the beginning, and looking back into railroad history we find that the man pictured at left, John Stevens, actually started it all. Stevens and his associates received the first Railroad Charter ever issued in America, from the State of New Jersey on February 6, 1815. In 1825, the first known application of steam locomotion to railway track occurred when a small locomotive with an upright boiler, built by this same John Stevens, was run on a circular track at Hoboken, New Jersey. These "*firsts*" began a new era in railroading in the United States.

A new era in railroading began, also, with the introduction of freight car cushioning devices used to protect both the cars and the lading from impact damage. One of the first such devices was the unit known today as the KEYSTONE SHOCK CONTROL. Countless refinements and improvements made on the original device by Keystone, have resulted in its reputation for being FIRST IN RELIABILITY. This reputation has been earned *the hard way*—by thousands of KEYSTONE SHOCK CONTROL equipped cars subjected to impact after impact during millions of miles of revenue service.

Results have proved KEYSTONE SHOCK CONTROL is the least expensive, most effective and reliable cushioning available for cars and lading. Make certain your cars and lading enjoy this fine, low cost protection. Write or call:

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ground corn, barley, rice, flour, sugar, malt, wheat, oats, rye, processed live stock feed, starch, hops, bauxite, rock phosphates, borax, pumice, sulphur, talc, ammonium nitrate, adiptic acid, calcium carbonate, sodium hyper-chlorite, sodium hydroxide, inorganic salts, d.m.t., sodium chloride, cement, lamp black, plastic pellets, fly ash, sand, potassium nitrate, sodium carbonate, copper sulphate, aluminum hydroxide, calcium carbide.

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MARKET OUTLOOK

Carloadings

Carloadings for the week ended Feb. 18 were not available as this issue went to press.

PIGGYBACK CARLOADINGS.— U. S. piggyback loadings for the week ended Feb. 11 totaled 20,501 cars, carrying 33,897 trailers, compared with 21,089 cars, carrying 35,168 trailers, in the corresponding 1966 week. Loadings for 1967 up to Feb. 11 totaled 124,783 cars, carrying 201,500 trailers compared with 118,-120 cars, carrying 193,776 trailers, in the corresponding period of 1966.

IN CANADA. — Carloadings for the seven-day period ended Feb. 7 totaled 69,902 cars, compared with 96,988 for the previous 10-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Totals Cars Rec'd from Connections
Totals for Canada		
Feb. 7, 1967	69,902	25,967
Feb. 7, 1966	74,549	24,511
Cumulative Totals		
Feb. 7, 1967	371,968	129,374
Feb. 7, 1966	368,951	127,599

The high cost of railroading

What does it cost today to maintain a railroad? More, in some cases, than it costs to build the line in the first place. Take Union Pacific, for example. Cost of construction of UP's line between Omaha, Neb. and Promontory, Utah, 1865-69, was $59.1 million—and UP last year alone spent more than that for maintenance of way and structures.

In terms of averages, UP puts in 141 miles of new 133-pound rail and more than 650,000 ties per year. And the maintenance cost is only part of the total. As UP notes, "a highly-maintained right of way is a valuable asset that draws a multi-million dollar tax bill from local assessors throughout the 13-state area served." But, while the cost is high, UP also takes a certain philosophical view. Says President Edd H. Bailey "The expenditures have to be viewed in terms of "the price of providing our customers with the best service possible."

FREIGHT TRAIN CARS

► *Pennsylvania.*—Ordered 139 "jumbo" 10,000 cu-ft box cars, for transporting automobile parts to assembly plants, at a cost of more than $4.2 million. Pullman-Standard will build 125 of the cars, and Thrall Car will build 14. The 70-ton-capacity cars will have cushion underframes and roller bearings. Deliveries will begin in April and will be completed in July. Including the Pennsylvania order, Pullman-Standard currently has orders for 785 auto-parts box cars of 10,000 cu-ft-capacity from six railroads. Thrall is building more than 200 of the same type of cars. The Thrall cars will be used to transport parts for Chevrolet, Chrysler, Ford and—for the first time—Oldsmobiles.

LOCOMOTIVES

► *Belt Railway of Chicago.*—Ordered one 1,500-hp SW1500 switching unit from EMD for delivery in June.

SPECIAL

► *Norfolk & Western.*—Has ordered two Locotrol Model 104 automatic control systems from the Control and Communication Division of Radiation, Inc. N&W will install the equipment on a pair of SD-45 diesel-electric locomotives to permit dual operation of the units. Each system will include two consoles, one for each side of the locomotive. This will be the first time the Locotrol system will be used in a dual-control configuration. The system, introduced in 1965, provides automatic control of slave engines from the lead locomotive by means of command signals transmitted over a radio link. The system coordinates speed, acceleration and braking of the lead and slave units.

NEW FACILITIES

► *Bessemer & Lake Erie.*—Work on the coal storage and transfer terminal at Conneaut, Ohio, has been continuing through the winter and is somewhat ahead of schedule. The facility was built in 1964-65 and is now undergoing its second major expansion. Most recent improvements include expanding the space for ground storage of coal (raising capacity to three million tons); construction of two 6,000-ton steel silos; the necessary connecting conveying systems; and a new versatile shiploader to supplement the existing shiploading equipment. The B&LE facility is designed to have a peak loading rate of 11,000 tons per hour, and an effective sustained rate of 7,000 tons per hour. Completion of the project is scheduled for November, but some of the new equipment will go into service this summer.

► *Union Pacific.*—Has begun construction of a new retarder classification yard at North Platte, Neb., featuring automatic retarder and automatic switching controls. Heart of the control system will be a digital computer. Controls will be furnished by Union Switch & Signal division of WABCO.

FOREIGN

► *Sudan Railways.*—Cummins 460-hp VT12-635BI engines and Voith L37Vb hydraulic transmissions will be installed in 23 diesel-hydraulic shunting locomotives to be built by Kisha Seizo Kaisha, Ltd., for Sudan Railways.

YOU OUGHT TO KNOW

Slave locomotives on N&W: Four railroads now have a total of more than 65 Locotrol installations which make possible operation of "slave" locomotive units. Locotrol is one of three systems currently offered for operating unattended mid-train locomotive units. Norfolk & Western is scheduled to join the ranks of slave operators when a new version of Locotrol will be installed on two of its SD-45 locomotives soon to be turned out by Electro-Motive (see P. 77). The space-age control systems coordinate precisely the speed, acceleration and braking of lead and slave units and have made possible operation of trains of up to 300 cars (RA, Nov. 14, 1966, p. 8).

Deep snow, high costs: The great storm of '67 which hit Chicago in late January whacked the Chicago Transit Authority with more than $1,425,000 in added costs, General Manager Thomas B. O'Connor reported last week. Among the major items of expense: Overtime pay, $762,332; rental of plowing equipment and two trucks, $400,000; salt, $175,000. Also classed as directly related to the storm were $88,000 in other expenses, including repairs to buses and other equipment damaged during the period. At the height of the storm, more than 700 buses were stalled in drifts—and CTA later found that 75 of them had fallen prey to vandals.

"Land O'Corn"—the crop fails: Declining patronage and mail diversion have led Illinois Central to post notice of intent to discontinue its "Land O'Corn" coach-mail trains operating between Chicago and Waterloo, Iowa. IC has had the two trains under observation for some time, in the hope that revenues would increase. But they haven't, and out-of-pocket deficits are now running at a rate of more than $300,000 a year. IC will maintain service over the route on its "Hawkeye," operating between Chicago and Sioux City, Iowa.

Santa Fe speedup: Santa Fe is cutting a day from its Chicago-Houston freight schedule with the inauguration of the "Texas Expediter." Southbound, after a pickup at Kansas City, the train stops only for crew changes and inspections until it reaches Gainesville, Tex. Blocks are made at Kansas City for Dallas, Fort Worth, Temple and Houston. Similar schedules have been set for the northbound move.

SP&S-ORC&B agreement set: That old phrase, "peaceful withdrawal from the service," cropped up in the Pacific Northwest on Feb. 17—but pickets marched for only a few hours before the strike ended with what negotiators for the Order of Railway Conductors & Brakemen called a "satisfactory settlement." Target of the walkout was Spokane, Portland & Seattle; the issue was suitable lodging. The union had served a notice on lodging in August 1964; it authorized strike action first in June 1965. From there, the dispute went the court route, with SP&S winning a restraining order in U.S. District Court, the union winning a reversal in the appellate court and the Supreme Court denying certiorari. With the high court's decision, announced in mid-January, negotiations were resumed, but no agreement was reached and the ORC&B once again planned strike action.

Pendulum back to passengers? Maine Central President E. Spencer Miller has made two predictions: (1) that highways will become so congested that movement of autos carrying one or two passengers and of freight in single vehicles will become non-existent or limited by law: (2) that when this happens, MC is ready to go back into the passenger business. Said Miller: "I see a time when large sections of this country are going to have problems similar to, and only less in magnitude than those of Japan."

Truck tonnage: Intercity truck tonnage in the week ended Feb. 11 was 4.2% below that of the previous week and 8.6% below the volume in the corresponding week of 1966, according to American Trucking Associations.

Current statistics

Net Income	
9 mos., 1966	$658,000,000
9 mos., 1965	542,000,000
Carloadings, revenue freight	
6 wks., 1967	3,068,041
6 wks., 1966	3,124,695
Freight cars on order	
Jan. 1, 1967	56,618
Jan. 1, 1966	44,297
Freight cars delivered	
12 mos., 1966	89,892
12 mos., 1965	77,861
Serviceable cars	
Jan. 1, 1967	1,425,203
Jan. 1, 1966	1,402,459

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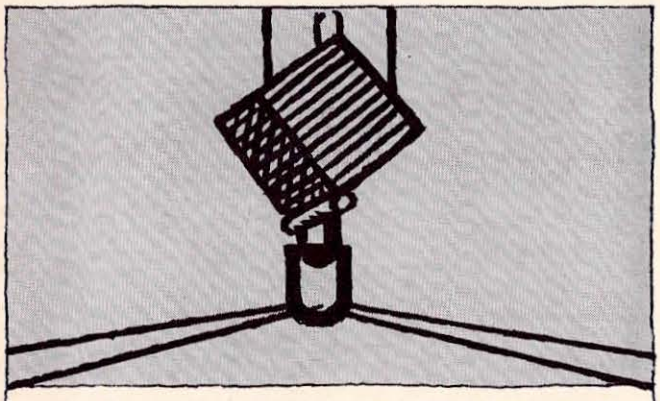
(RA 27)



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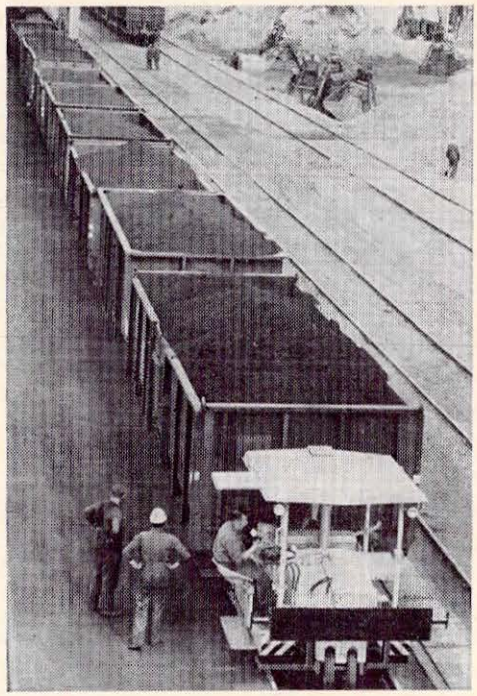

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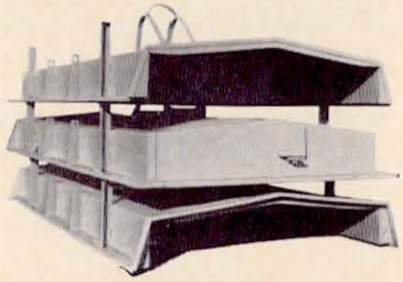

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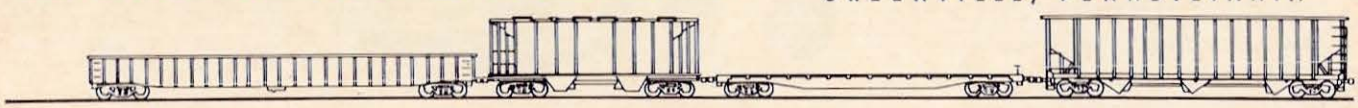

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VIEWPOINT

Can a carrot become a garrot?

Railroad planners were jolted last October when the Administration suspended the investment tax credit. The industry, poised for another year of blockbuster buying, paused and began to thoughtfully re-examine its 1967 shopping lists for capital goods.

As is often the case with hasty action, the suspension is working in ways not foreseen by the politicians trying to structure water-faucet economic controls. The suspension, for example, has not particularly slowed most of the industry at the center of the "action" that was overheating the economy in mid-1966. Industries with healthy cash flow and short depreciation cycles are, by and large, going right ahead with capital programs planned for 1967. In many cases, such industries have increased their capital outlays. Companies with 10% and 20% returns on investment and with short depreciation cycles are not going to be suckered into a slowdown while competition spurts ahead.

Railroads, on the other hand, are severely disadvantaged by the suspension. The Administration's move raised the real cost to railroads of the capital goods the industry buys. The price-effect of the suspension ranged from 7% to 14% and even higher if one includes the so called "phantom" effect upon railroads from reinstatement of the investment tax credit. The effect of the suspension varied from railroad to railroad, but it severely affected them all. The suspension is proving to be especially hard on industry with low rates of return on investment, tight capital supply and long depreciation cycles—which is almost an economist's definition of the railroads.

Indirect price control

We think that planning, at best, is complicated enough in an economy and society like ours. When politicians change the ground rules in an attempt to get control of the economy via measures that amount to indirect price controls—planning gets hazardous indeed. Traditional approaches to the problem of dampening inflationary pressures have always dealt directly with money supply—increased taxes, higher interest rates and so-forth. Planning in the private sector, on the other hand, always was based squarely on one's pocketbook and prospects. Now, with the kind of indirect price control the Administration has created, planning will have to be done with pocketbook, prospects and politicians in mind. It is a grim new element in corporate planning—especially in marginal industries like ours.

Consider the suspension of the investment tax credit. If the Administration had simply wiped the credit away, railroads and other industries would have taken the price-rise in stride and adjusted capital goods shopping lists downward to fit both pocketbooks and prospects—and that would have been that. Unfortunately, the legislation also included a promise for a price-reduction, next Jan. 1, when the suspension is lifted. Thus, the Administration dangled a carrot in front of those willing to wait. But, one industry's carrot may be another industry's garrot.

A slowdown in car buying

Railroad managers, after a pause to do their investment arithmetic over again, are obviously cutting down on capital expenditures wherever it is possible to do so. Severe shortages of capital alone are enough to force industry managers to look twice and procrastinate before they buy. Several surveys made in recent weeks suggest rail orders placed in 1967 will be substantially less than orders placed in 1966.

The Administration's suspension of the investment tax credit has created some weird situations—but none weirder than the carrot/garrot situation in the railroad and railway supply industries. The "hot" spots in the economy haven't been cooled at all by the suspension. But the already too-cool railroad sector has gotten cold, cold, cold. Even the politicians must be appalled at the supension's impact upon railroads. The inept intrusion of government into the planning process of private industry via the giving and withholding of price advantage seems a rather far-fetched way of combating inflation. While we hope the Administration takes swift action to restore the investment tax credit, we would prefer to see the investment tax credit abolished entirely rather than have politicians use the power to exercise direct control of private planning through indirect price-control measures like on-and-off investment tax legislation.

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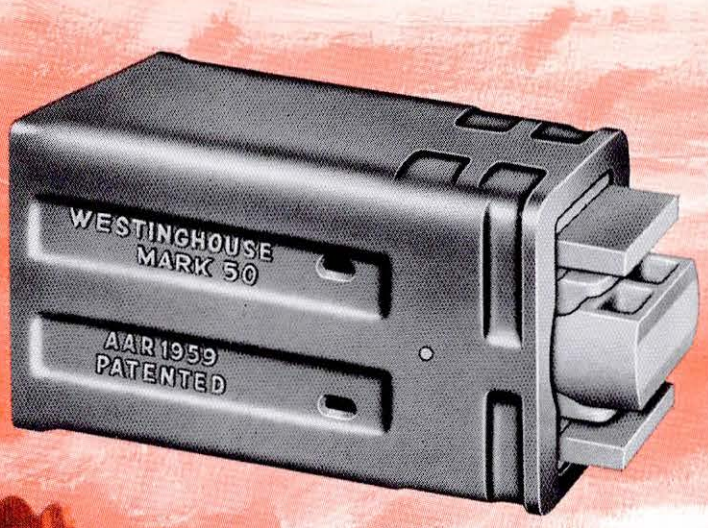

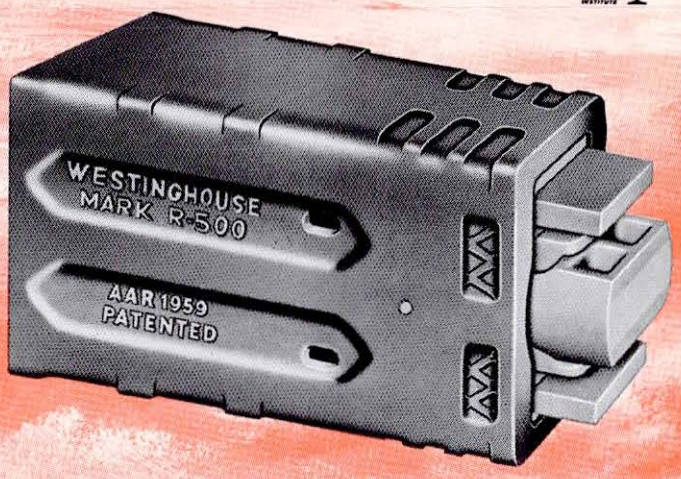

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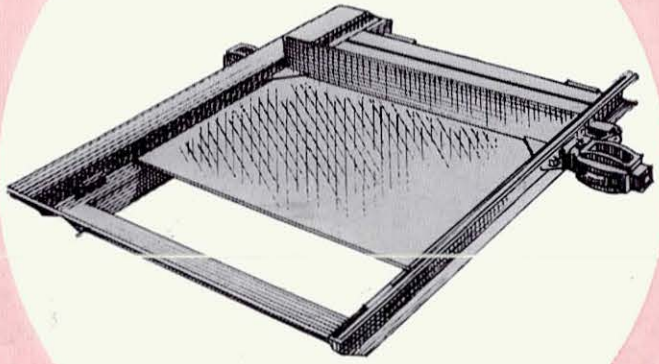

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